

## CRITICAL REASONING TEST SECTION 1

30 Minutes 20 Questions

1. Nearly one in three subscribers to *Financial Forecaster* is a millionaire, and over half are in top management. Shouldn't you subscribe to *Financial Forecaster* now?

A reader who is neither a millionaire nor in top management would be most likely to act in accordance with the advertisement's suggestion if he or she drew which of the following questionable conclusions invited by the advertisement?

- (A) Among finance-related periodicals, *Financial Forecaster* provides the most detailed financial information.
- (B) Top managers cannot do their jobs properly without reading *Financial Forecaster*.
- (C) The advertisement is placed where those who will be likely to read it are millionaires.
- (D) The subscribers mentioned were helped to become millionaires or join top management by reading *Financial Forecaster*.
- (E) Only those who will in fact become millionaires, or at least top managers, will read the advertisement.

Questions 2-3 are based on the following.

Contrary to the charges made by some of its opponents, the provisions of the new deficit-reduction law for indiscriminate cuts in the federal budget are justified. Opponents should remember that the New Deal pulled this country out of great economic troubles even though some of its programs were later found to be unconstitutional.

2. The author's method of attacking the charges of certain opponents of the new deficit-reduction law is to

- (A) attack the character of the opponents rather than their claim
- (B) imply an analogy between the law and some New Deal programs
- (C) point out that the opponents' claims imply a dilemma
- (D) show that the opponents' reasoning leads to an absurd conclusion
- (E) show that the New Deal also called for indiscriminate cuts in the federal budget

3. The opponents could effectively defend their position against the author's strategy by pointing out that

- (A) the expertise of those opposing the law is outstanding
- (B) the lack of justification for the new law does not imply that those who drew it up were either inept or immoral
- (C) the practical application of the new law will not entail indiscriminate budget cuts
- (D) economic troubles present at the time of the New Deal were equal in severity to those that have led to the present law
- (E) the fact that certain flawed programs or laws have improved the economy does not prove that every such program can do so

4. In Millington, a city of 50,000 people, Mercedes Pedrosa, a realtor, calculated that a family with Millington's median family income, \$28,000 a year, could afford to buy Millington's median-priced \$77,000 house. This calculation was based on an 11.2 percent mortgage interest rate and on the realtor's assumption that a family could only afford to pay up to 25 percent of its income for housing.

Which of the following corrections of a figure appearing in the passage above, if it were the only correction that needed to be made, would yield a new calculation showing that even incomes below the median family income would enable families in Millington to afford Millington's median-priced house?

- (A) Millington's total population was 45,000 people.

- (B) Millington's median annual family income was \$27,000
- (C) Millington's median-priced house cost \$80,000
- (D) The rate at which people in Millington had to pay mortgage interest was only 10 percent.
- (E) Families in Millington could only afford to pay up to 22 percent of their annual income for housing.

5. Psychological research indicates that college hockey and football players are more quickly moved to hostility and aggression than are college athletes in noncontact sports such as swimming. But the researchers' conclusion—that contact sports encourage and teach participants to be hostile and aggressive—is untenable. The football and hockey players were probably more hostile and aggressive to start with than the swimmers.

Which of the following, if true, would most strengthen the conclusion drawn by the psychological researchers?

- (A) The football and hockey players became more hostile and aggressive during the season and remained so during the off-season, whereas there was no increase in aggressiveness among the swimmers.
- (B) The football and hockey players, but not the swimmers, were aware at the start of the experiment that they were being tested for aggressiveness.
- (C) The same psychological research indicated that the football and hockey players had a great respect for cooperation and team play, whereas the swimmers were most concerned with excelling as individual competitors.
- (D) The research studies were designed to include no college athletes who participated in both contact and noncontact sports.
- (E) Throughout the United States, more incidents of fan violence occur at baseball games than occur at hockey or football games.

6. Ross: The profitability of Company X, restored to private ownership five years ago, is clear evidence that businesses will always fare better under private than under public ownership.

Julia: Wrong. A close look at the records shows that X has been profitable since the appointment of a first-class manager, which happened while X was still in the public sector.

Which of the following best describes the weak point in Ross's claim on which Julia's response focuses?

- (A) The evidence Ross cites comes from only a single observed case, that of Company X.
- (B) The profitability of Company X might be only temporary.
- (C) Ross's statement leaves open the possibility that the cause he cites came after the effect he attributes to it.
- (D) No mention is made of companies that are partly government owned and partly privately owned.
- (E) No exact figures are given for the current profits of Company X.

7. Stronger patent laws are needed to protect inventions from being pirated. With that protection, manufacturers would be encouraged to invest in the development of new products and technologies. Such investment frequently results in an increase in a manufacturer's productivity.

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

- (A) Stronger patent laws tend to benefit financial institutions as well as manufacturers.
- (B) Increased productivity in manufacturing is likely to be accompanied by the creation of more manufacturing jobs.
- (C) Manufacturers will decrease investment in the development of new products and technologies unless there are stronger patent laws.
- (D) The weakness of current patent laws has been a cause of economic recession.

- (E) Stronger patent laws would stimulate improvements in productivity for many manufacturers.

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

At large amusement parks, live shows are used very deliberately to influence crowd movements. Lunchtime performances relieve the pressure on a park's restaurants. Evening performances have a rather different purpose: to encourage visitors to stay for supper. Behind this surface divergence in immediate purpose there is the unified underlying goal of \_ \_ \_ \_ \_.

- (A) keeping the lines at the various rides short by drawing off part of the crowd
- (B) enhancing revenue by attracting people who come only for the live shows and then leave the park
- (C) avoiding as far as possible traffic jams caused by visitors entering or leaving the park
- (D) encouraging as many people as possible to come to the park in order to eat at the restaurants
- (E) utilizing the restaurants at optimal levels for as much of the day as possible

9. James weighs more than Kelly.

Luis weighs more than Mark.

Mark weighs less than Ned.

Kelly and Ned are exactly the same weight.

If the information above is true, which of the following must also be true?

- (A) Luis weighs more than Ned.
- (B) Luis weighs more than James.
- (C) Kelly weighs less than Luis.
- (D) James weighs more than Mark
- (E) Kelly weighs less than Mark.

Questions 10-11 are based on the following.

Partly because of bad weather, but also partly because some major pepper growers have switched to high-priced cocoa, world production of pepper has been running well below worldwide sales for three years. Pepper is consequently in relatively short supply. The price of pepper has soared in response: it now equals that of cocoa.

10. Which of the following can be inferred from the passage?

- (A) Pepper is a profitable crop only if it is grown on a large scale.
- (B) World consumption of pepper has been unusually high for three years.
- (C) World production of pepper will return to previous levels once normal weather returns.
- (D) Surplus stocks of pepper have been reduced in the past three years.
- (E) The profits that the growers of pepper have made in the past three years have been unprecedented.

11. Some observers have concluded that the rise in the price of pepper means that the switch by some growers from pepper to cocoa left those growers no better off than if none of them had switched; this conclusion, however, is unwarranted because it can be inferred to be likely that

- (A) those growers could not have foreseen how high the price of pepper would go
- (B) the initial cost involved in switching from pepper to cocoa is substantial
- (C) supplies of pepper would not be as low as they are if those growers had not switched crops
- (D) cocoa crops are as susceptible to being reduced by bad weather as are pepper crops
- (E) as more growers turn to growing cocoa, cocoa supplies will increase and the price of cocoa will fall precipitously.

12. Using computer techniques, researchers analyze layers of paint that lie buried beneath the surface layers of old paintings. They claim, for example, that additional mountainous scenery once appeared in Leonardo da Vinci's *Mona Lisa*, which was later painted over. Skeptics reply to these claims, however, that X-ray examinations of the *Mona Lisa* do not show hidden mountains.

Which of the following, if true, would tend most to weaken the force of the skeptics' objections?

- (A) There is no written or anecdotal record that Leonardo da Vinci ever painted over major areas of his *Mona Lisa*.
  - (B) Painters of da Vinci's time commonly created images of mountainous scenery in the backgrounds of portraits like the *Mona Lisa*.
  - (C) No one knows for certain what parts of the *Mona Lisa* may have been painted by da Vinci's assistants rather than by da Vinci himself.
  - (D) Infrared photography of the *Mona Lisa* has revealed no trace of hidden mountainous scenery.
  - (E) Analysis relying on X-rays only has the capacity to detect lead-based white pigments in layers of paint beneath a painting's surface layers.
13. While Governor Verdant has been in office, the state's budget has increased by an average of 6 percent each year. While the previous governor was in office, the state's budget increased by an average of 11.5 percent each year. Obviously, the austere budgets during Governor Verdant's term have caused the slowdown in the growth in state spending.

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

- (A) The rate of inflation in the state averaged 10 percent each year during the previous governor's term in office and 3 percent each year during Verdant's term.
  - (B) Both federal and state income tax rates have been lowered considerably during Verdant's term in office.
  - (C) In each year of Verdant's term in office, the state's budget has shown some increase in spending over the previous year.
  - (D) During Verdant's term in office, the state has either discontinued or begun to charge private citizens for numerous services that the state offered free to citizens during the previous governor's term.
  - (E) During the previous governor's term in office, the state introduced several so-called "austerity" budgets intended to reduce the growth in state spending.
14. Federal agricultural programs aimed at benefiting one group whose livelihood depends on farming often end up harming another such group.

Which of the following statements provides support for the claim above?

- . An effort to help feed-grain producers resulted in higher prices for their crops, but the higher prices decreased the profits of livestock producers.
  - . In order to reduce crop surpluses and increase prices, growers of certain crops were paid to leave a portion of their land idle, but the reduction was not achieved because improvements in efficiency resulted in higher production on the land in use.
  - . Many farm workers were put out of work when a program meant to raise the price of grain provided grain growers with an incentive to reduce production by giving them surplus grain from government reserves.
- (A) , but not and not
  - (B) , but not and not
  - (C) and , but not
  - (D) and , but not
  - (E) , and

15. Technological education is worsening. People between eighteen and twenty-four, who are just emerging from their formal education, are more likely to be technologically illiterate than somewhat older adults. And yet, issues for public referenda will increasingly involve aspects

of technology.

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

- (A) If all young people are to make informed decisions on public referenda, many of them must learn more about technology.
- (B) Thorough studies of technological issues and innovations should be made a required part of the public and private school curriculum.
- (C) It should be suggested that prospective voters attend applied science courses in order to acquire a minimal competency in technical matters.
- (D) If young people are not to be overly influenced by famous technocrats, they must increase their knowledge of pure science.
- (E) On public referenda issues, young people tend to confuse real or probable technologies with impossible ideals.

16. In a political system with only two major parties, the entrance of a third-party candidate into an election race damages the chances of only one of the two major candidates. The third-party candidate always attracts some of the voters who might otherwise have voted for one of the two major candidates, but not voters who support the other candidate. Since a third-party candidacy affects the two major candidates unequally, for reasons neither of them has any control over, the practice is unfair and should not be allowed.

If the factual information in the passage above is true, which of the following can be most reliably inferred from it?

- (A) If the political platform of the third party is a compromise position between that of the two major parties, the third party will draw its voters equally from the two major parties.
- (B) If, before the emergence of a third party, voters were divided equally between the two major parties, neither of the major parties is likely to capture much more than one-half of the vote.
- (C) A third-party candidate will not capture the votes of new voters who have never voted for candidates of either of the two major parties.
- (D) The political stance of a third party will be more radical than that of either of the two major parties.
- (E) The founders of a third party are likely to be a coalition consisting of former leaders of the two major parties.

17. Companies considering new cost-cutting manufacturing processes often compare the projected results of making the investment against the alternative of not making the investment with costs, selling prices, and share of market remaining constant.

Which of the following, assuming that each is a realistic possibility, constitutes the most serious disadvantage for companies of using the method above for evaluating the financial benefit of new manufacturing processes?

- (A) The costs of materials required by the new process might not be known with certainty.
- (B) In several years interest rates might go down, reducing the interest costs of borrowing money to pay for the investment.
- (C) Some cost-cutting processes might require such expensive investments that there would be no net gain for many years, until the investment was paid for by savings in the manufacturing process.
- (D) Competitors that do invest in a new process might reduce their selling prices and thus take market share away from companies that do not.
- (E) The period of year chosen for averaging out the cost of the investment might be somewhat longer or shorter, thus affecting the result.

18. There are far fewer children available for adoption than there are people who want to adopt. Two million couples are currently waiting to adopt, but in 1982, the last year for which figures exist, there were only some 50,000 adoptions.

Which of the following statements, if true, most strengthens the author's claim that there are

far fewer children available for adoption than there are people who want to adopt?

- (A) The number of couples waiting to adopt has increased significantly in the last decade.
- (B) The number of adoptions in the current year is greater than the number of adoptions in any preceding year.
- (C) The number of adoptions in a year is approximately equal to the number of children available for adoption in that period.
- (D) People who seek to adopt children often go through a long process of interviews and investigation by adoption agencies.
- (E) People who seek to adopt children generally make very good parents.

Questions 19-20 are based on the following

Archaeologists seeking the location of a legendary siege and destruction of a city are excavating in several possible places, including a middle and a lower layer of a large mound. The bottom of the middle layer contains some pieces of pottery of type 3, known to be from a later period than the time of the destruction of the city, but the lower layer does not.

19. Which of the following hypotheses is best supported by the evidence above?

- (A) The lower layer contains the remains of the city where the siege took place.
- (B) The legend confuses stories from two different historical periods.
- (C) The middle layer does not represent the period of the siege.
- (D) The siege lasted for a long time before the city was destroyed.
- (E) The pottery of type 3 was imported to the city by traders.

20. The force of the evidence cited above is most seriously weakened if which of the following is true?

- (A) Gerbils, small animals long native to the area, dig large burrows into which objects can fall when the burrows collapse.
- (B) Pottery of types 1 and 2, found in the lower level, was used in the cities from which, according to the legend, the besieging forces came.
- (C) Several pieces of stone from a lower-layer wall have been found incorporated into the remains of a building in the middle layer.
- (D) Both the middle and the lower layer show evidence of large-scale destruction of habitations by fire.
- (E) Bronze axheads of a type used at the time of the siege were found in the lower level of excavation.

## CRITICAL REASONING TEST SECTION 2

30 Minutes 20 Questions

1. After the national speed limit of 55 miles per hour was imposed in 1974, the number of deaths per mile driven on a highway fell abruptly as a result. Since then, however, the average speed of vehicles on highways has risen, but the number of deaths per mile driven on a highway has continued to fall.

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

- (A) The speed limit alone is probably not responsible for the continued reduction in highway deaths in the years after 1974.
- (B) People have been driving less since 1974.
- (C) Driver-education courses have been more effective since 1974 in teaching drivers to drive safely.
- (D) In recent years highway patrols have been less effective in catching drivers who speed.
- (E) The change in the speed limit cannot be responsible for the abrupt decline in highway deaths in 1974.

2. Neighboring landholders: Air pollution from the giant aluminum refinery that has been built

next to our land is killing our plants.

Company spokesperson: The refinery is not to blame, since our study shows that the damage is due to insects and fungi.

Which of the following, if true, most seriously weakens the conclusion drawn by the company spokesperson?

- (A) The study did not measure the quantity of pollutants emitted into the surrounding air by the aluminum refinery.
- (B) The neighboring landholders have made no change in the way they take care of their plants.
- (C) Air pollution from the refinery has changed the chemical balance in the plants' environment, allowing the harmful insects and fungi to thrive.
- (D) Pollutants that are invisible and odorless are emitted into the surrounding air by the refinery.
- (E) The various species of insects and fungi mentioned in the study have been occasionally found in the locality during the past hundred years.

3. Sales taxes tend to be regressive, affecting poor people more severely than wealthy people. When all purchases of consumer goods are taxed at a fixed percentage of the purchase price, poor people pay a larger proportion of their income in sales taxes than wealthy people do.

It can be correctly inferred on the basis of the statements above that which of the following is true?

- (A) Poor people constitute a larger proportion of the taxpaying population than wealthy people do.
- (B) Poor people spend a larger proportion of their income on purchases of consumer goods than wealthy people do.
- (C) Wealthy people pay, on average, a larger amount of sales taxes than poor people do.
- (D) The total amount spent by all poor people on purchases of consumer goods exceeds the total amount spent by all wealthy people on consumer goods.
- (E) The average purchase price of consumer goods bought by wealthy people is higher than that of consumer goods bought by poor people.

4. Reviewing historical data, medical researchers in California found that counties with the largest number of television sets per capita have had the lowest incidence of a serious brain disease, mosquito-borne encephalitis. The researchers have concluded that people in these counties stay indoors more and thus avoid exposure to the disease.

The researchers' conclusion would be most strengthened if which of the following were true?

- (A) Programs designed to control the size of disease-bearing mosquito populations have not affected the incidence of mosquito-borne encephalitis.
- (B) The occupations of county residents affect their risk of exposure to mosquito-borne encephalitis more than does television-watching.
- (C) The incidence of mosquito-borne encephalitis in counties with the largest number of television sets per capita is likely to decrease even further.
- (D) The more time people in a county spend outdoors, the greater their awareness of the dangers of mosquito-borne encephalitis.
- (E) The more television sets there are per capita in a county, the more time the average county resident spends watching television.

5. The city's public transportation system should be removed from the jurisdiction of the municipal government, which finds it politically impossible either to raise fares or to institute cost-saving reductions in service. If public transportation were handled by a private firm, profits would be vigorously pursued, thereby eliminating the necessity for covering operating costs with government funds.

The statements above best support the conclusion that

- (A) the private firms that would handle public transportation would have experience in the transportation industry

- (B) political considerations would not prevent private firms from ensuring that revenues cover operating costs  
(C) private firms would receive government funding if it were needed to cover operating costs  
(D) the public would approve the cost-cutting actions taken by the private firm  
(E) the municipal government would not be resigned to accumulating merely enough income to cover costs
6. To entice customers away from competitors, Red Label supermarkets have begun offering discounts on home appliances to customers who spend \$50 or more on any shopping trip to Red Label. Red Label executives claim that the discount program has been a huge success, since cash register receipts of \$50 or more are up thirty percent since the beginning of the program.
- Which of the following, if true, most seriously weakens the claim of the Red Label executives?
- (A) Most people who switched to Red Label after the program began spend more than \$50 each time they shop at Red Label.  
(B) Most people whose average grocery bill is less than \$50 would not be persuaded to spend more by any discount program.  
(C) Most people who received discounts on home appliances through Red Label's program will shop at Red Label after the program ends.  
(D) Since the beginning of the discount program, most of the people who spend \$50 or more at Red Label are people who have never before shopped there and whose average grocery bill has always been higher than \$50.  
(E) Almost all of the people who have begun spending \$50 or more at Red Label since the discount program began are longtime customers who have increased the average amount of their shopping bills by making fewer trips.
7. Throughout the 1950's, there were increases in the numbers of dead birds found in agricultural areas after pesticide sprayings. Pesticide manufacturers claimed that the publicity given to bird deaths stimulated volunteers to look for dead birds, and that the increase in numbers reported was attributable to the increase in the number of people looking.
- Which of the following statements, if true, would help to refute the claim of the pesticide manufacturers?
- (A) The publicity given to bird deaths was largely regional and never reached national proportions.  
(B) Pesticide sprayings were timed to coincide with various phases of the life cycles of the insects they destroyed.  
(C) No provision was made to ensure that a dead bird would not be reported by more than one observer.  
(D) Initial increases in bird deaths had been noticed by agricultural workers long before any publicity had been given to the matter.  
(E) Dead birds of the same species as those found in agricultural areas had been found along coastal areas where no farming took place.
8. Teenagers are often priced out of the labor market by the government-mandated minimum-wage level because employers cannot afford to pay that much for extra help. Therefore, if Congress institutes a subminimum wage, a new lower legal wage for teenagers, the teenage unemployment rate, which has been rising since 1960, will no longer increase.
- Which of the following, if true, would most weaken the argument above?
- (A) Since 1960 the teenage unemployment rate has risen when the minimum wage has risen.  
(B) Since 1960 the teenage unemployment rate has risen even when the minimum wage remained constant.  
(C) Employers often hire extra help during holiday and warm weather seasons.  
(D) The teenage unemployment rate rose more quickly in the 1970's than it did in the 1960's.  
(E) The teenage unemployment rate has occasionally declined in the years since 1960.
9. Which of the following best completes the passage below?



The computer industry's estimate that it loses millions of dollars when users illegally copy programs without paying for them is greatly exaggerated. Most of the illegal copying is done by people with no serious interest in the programs. Thus, the loss to the industry is much smaller than estimated because

- (A) many users who illegally copy programs never find any use for them
- (B) most of the illegally copied programs would not be purchased even if purchasing them were the only way to obtain them
- (C) even if the computer industry received all the revenue it claims to be losing, it would still be experiencing financial difficulties
- (D) the total market value of all illegal copies is low in comparison to the total revenue of the computer industry
- (E) the number of programs that are frequently copied illegally is low in comparison to the number of programs available for sale

10. This year the New Hampshire Division of Company X, set a new record for annual sales by that division. This record is especially surprising since the New Hampshire Division has the smallest potential market and the lowest sales of any of Company X's divisions.

Which of the following identifies a flaw in the logical coherence of the statement above?

- (A) If overall sales for Company X were sharply reduced, the New Hampshire Division's new sales record is irrelevant to the company's prosperity.
- (B) Since the division is competing against its own record, the comparison of its sales record with that of other divisions is irrelevant.
- (C) If this is the first year that the New Hampshire Division has been last in sales among Company X's divisions, the new record is not surprising at all.
- (D) If overall sales for Company X were greater than usual, it is not surprising that the New Hampshire Division was last in sales.
- (E) Since the New Hampshire Division has the smallest potential market, it is not surprising that it had the lowest sales.

11. Statement of a United States copper mining company: Import quotas should be imposed on the less expensive copper mined outside the country to maintain the price of copper in this country; otherwise, our companies will not be able to stay in business.

Response of a United States copper wire manufacturer: United States wire and cable manufacturers purchase about 70 percent of the copper mined in the United States. If the copper prices we pay are not at the international level, our sales will drop, and then the demand for United States copper will go down.

If the factual information presented by both companies is accurate, the best assessment of the logical relationship between the two arguments is that the wire manufacturer's argument

- (A) is self-serving and irrelevant to the proposal of the mining company
- (B) is circular, presupposing what it seeks to prove about the proposal of the mining company
- (C) shows that the proposal of the mining company would have a negative effect on the mining company's own business
- (D) fails to give a reason why the proposal of the mining company should not be put into effect to alleviate the concern of the mining company for staying in business
- (E) establishes that even the mining company's business will prosper if the mining company's proposal is rejected

12. Y has been believed to cause Z. A new report, noting that Y and Z are often observed to be preceded by X, suggests that X, not Y, may be the cause of Z.

Which of the following further observations would best support the new report's suggestion?

- (A) In cases where X occurs but Y does not, X is usually followed by Z.
- (B) In cases where X occurs, followed by Y, Y is usually followed by Z.
- (C) In cases where Y occurs but X does not, Y is usually followed by Z.
- (D) In cases where Y occurs but Z does not, Y is usually preceded by X.
- (E) In cases where Z occurs, it is usually preceded by X and Y.

13. Mr. Primm: If hospitals were private enterprises, dependent on profits for their survival, there would be no teaching hospitals, because of the intrinsically high cost of running such hospitals.

Ms. Nakai: I disagree. The medical challenges provided by teaching hospitals attract the very best physicians. This, in turn, enables those hospitals to concentrate on nonroutine cases.

Which of the following, if true, would most strengthen Ms. Nakai's attempt to refute Mr. Primm's claim?

- (A) Doctors at teaching hospitals command high salaries.
- (B) Sophisticated, nonroutine medical care commands a high price.
- (C) Existing teaching hospitals derive some revenue from public subsidies.
- (D) The patient mortality rate at teaching hospitals is high.
- (E) The modern trend among physicians is to become highly specialized.

14. A recent survey of all auto accident victims in Dole County found that, of the severely injured drivers and front-seat passengers, 80 percent were not wearing seat belts at the time of their accidents. This indicates that, by wearing seat belts, drivers and front-seat passengers can greatly reduce their risk of being severely injured if they are in an auto accident.

The conclusion above is not properly drawn unless which of the following is true?

- (A) Of all the drivers and front-seat passengers in the survey, more than 20 percent were wearing seat belts at the time of their accidents.
- (B) Considerably more than 20 percent of drivers and front-seat passengers in Dole County always wear seat belts when traveling by car.
- (C) More drivers and front-seat passengers in the survey than rear-seat passengers were very severely injured.
- (D) More than half of the drivers and front-seat passengers in the survey were not wearing seat belts at the time of their accidents.
- (E) Most of the auto accidents reported to police in Dole County do not involve any serious injury.

15. Six months or so after getting a video recorder, many early buyers apparently lost interest in obtaining videos to watch on it. The trade of businesses selling and renting videos is still buoyant, because the number of homes with video recorders is still growing. But clearly, once the market for video recorders is saturated, businesses distributing videos face hard times.

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

- (A) The market for video recorders would not be considered saturated until there was one in 80 percent of homes.
- (B) Among the items handled by video distributors are many films specifically produced as video features.
- (C) Few of the early buyers of video recorders raised any complaints about performance aspects of the new product.
- (D) The early buyers of a novel product are always people who are quick to acquire novelties, but also often as quick to tire of them.
- (E) In a shrinking market, competition always intensifies and marginal businesses fail.

16. Advertiser: The revenue that newspapers and magazines earn by publishing advertisements allows publishers to keep the prices per copy of their publications much lower than would otherwise be possible. Therefore, consumers benefit economically from advertising.

Consumer: But who pays for the advertising that pays for low-priced newspapers and magazines? We consumers do, because advertisers pass along advertising costs to us through the higher prices they charge for their products.

Which of the following best describes how the consumer counters the advertiser's argument?

- (A) By alleging something that, if true, would weaken the plausibility of the advertiser's conclusion
- (B) By questioning the truth of the purportedly factual statement on which the advertiser's

conclusion is based

- (C) By offering an interpretation of the advertiser's opening statement that, if accurate, shows that there is an implicit contradiction in it
- (D) By pointing out that the advertiser's point of view is biased
- (E) By arguing that the advertiser too narrowly restricts the discussion to the effects of advertising that are economic
17. Mr. Lawson: We should adopt a national family policy that includes legislation requiring employers to provide paid parental leave and establishing government-sponsored day care. Such laws would decrease the stress levels of employees who have responsibility for small children. Thus, such laws would lead to happier, better-adjusted families.
- Which of the following, if true, would most strengthen the conclusion above?
- (A) An employee's high stress level can be a cause of unhappiness and poor adjustment for his or her family.
- (B) People who have responsibility for small children and who work outside the home have higher stress levels than those who do not.
- (C) The goal of a national family policy is to lower the stress levels of parents.
- (D) Any national family policy that is adopted would include legislation requiring employers to provide paid parental leave and establishing government-sponsored day care.
- (E) Most children who have been cared for in daycare centers are happy and well adjusted.
18. Lark Manufacturing Company initiated a voluntary Quality Circles program for machine operators. Independent surveys of employee attitudes indicated that the machine operators participating in the program were less satisfied with their work situations after two years of the program's existence than they were at the program's start. Obviously, any workers who participate in a Quality Circles program will, as a result, become less satisfied with their jobs.
- Each of the following, if true, would weaken the conclusion drawn above EXCEPT:
- (A) The second survey occurred during a period of recession when rumors of cutbacks and layoffs at Lark Manufacturing were plentiful.
- (B) The surveys also showed that those Lark machine operators who neither participated in Quality Circles nor knew anyone who did so reported the same degree of lessened satisfaction with their work situations as did the Lark machine operators who participated in Quality Circles.
- (C) While participating in Quality Circles at Lark Manufacturing, machine operators exhibited two of the primary indicators of improved job satisfaction: increased productivity and decreased absenteeism.
- (D) Several workers at Lark Manufacturing who had participated in Quality Circles while employed at other companies reported that, while participating in Quality Circles in their previous companies, their work satisfaction had increased.
- (E) The machine operators who participated in Quality Circles reported that, when the program started, they felt that participation might improve their work situations.

Questions 19-20 are based on the following.

Blood banks will shortly start to screen all donors for NANB hepatitis. Although the new screening tests are estimated to disqualify up to 5 percent of all prospective blood donors, they will still miss two-thirds of donors carrying NANB hepatitis. Therefore, about 10 percent of actual donors will still supply NANB-contaminated blood.

19. The argument above depends on which of the following assumptions?
- (A) Donors carrying NANB hepatitis do not, in a large percentage of cases, carry other infections for which reliable screening tests are routinely performed.
- (B) Donors carrying NANB hepatitis do not, in a large percentage of cases, develop the disease themselves at any point.
- (C) The estimate of the number of donors who would be disqualified by tests for NANB hepatitis is an underestimate.
- (D) The incidence of NANB hepatitis is lower among the potential blood donors than it is in the population at large.

- (E) The donors who will still supply NANB-contaminated blood will donate blood at the average frequency for all donors.
20. Which of the following inferences about the consequences of instituting the new tests is best supported by the passage above?
- (A) The incidence of new cases of NANB hepatitis is likely to go up by 10 percent.  
(B) Donations made by patients specifically for their own use are likely to become less frequent.  
(C) The demand for blood from blood banks is likely to fluctuate more strongly.  
(D) The blood supplies available from blood banks are likely to go down.  
(E) The number of prospective first-time donors is likely to go up by 5 percent.

**CRITICAL REASONING TEST SECTION 3****30 Minutes    20 Questions**

1. Child's World, a chain of toy stores, has relied on a "supermarket concept" of computerized inventory control and customer self-service to eliminate the category of sales clerks from its force of employees. It now plans to employ the same concept in selling children's clothes.

The plan of Child's World assumes that

- (A) supermarkets will not also be selling children's clothes in the same manner  
(B) personal service by sales personnel is not required for selling children's clothes successfully  
(C) the same kind of computers will be used in inventory control for both clothes and toys at Child's World  
(D) a self-service plan cannot be employed without computerized inventory control  
(E) sales clerks are the only employees of Child's World who could be assigned tasks related to inventory control
2. Continuous indoor fluorescent light benefits the health of hamsters with inherited heart disease. A group of them exposed to continuous fluorescent light survived twenty-five percent longer than a similar group exposed instead to equal periods of indoor fluorescent light and of darkness.
- The method of the research described above is most likely to be applicable in addressing which of the following questions?
- (A) Can industrial workers who need to see their work do so better by sunlight or by fluorescent light?  
(B) Can hospital lighting be improved to promote the recovery of patients?  
(C) How do deep-sea fish survive in total darkness?  
(D) What are the inherited illnesses to which hamsters are subject?  
(E) Are there plants that require specific periods of darkness in order to bloom?
3. Millions of identical copies of a plant can be produced using new tissue-culture and cloning techniques.
- If plant propagation by such methods in laboratories proves economical, each of the following, if true, represents a benefit of the new techniques to farmers EXCEPT:
- (A) The techniques allow the development of superior strains to take place more rapidly, requiring fewer generations of plants grown to maturity.  
(B) It is less difficult to care for plants that will grow at rates that do not vary widely.  
(C) Plant diseases and pests, once they take hold, spread more rapidly among genetically uniform plants than among those with genetic variations.  
(D) Mechanical harvesting of crops is less difficult if plants are more uniform in size.  
(E) Special genetic traits can more easily be introduced into plant strains with the use of the new techniques.
4. Which of the following best completes the passage below?

Sales campaigns aimed at the faltering personal computer market have strongly emphasized ease of use, called user-friendliness. This emphasis is oddly premature and irrelevant in the eyes of most potential buyers, who are trying to address the logically prior issue of whether---

- (A) user-friendliness also implies that owners can service their own computers
- (B) personal computers cost more the more user-friendly they are
- (C) currently available models are user-friendly enough to suit them
- (D) the people promoting personal computers use them in their own homes
- (E) they have enough sensible uses for a personal computer to justify the expense of buying one

5. A weapons-smuggling incident recently took place in country Y. We all know that Y is a closed society. So Y's government must have known about the weapons.

Which of the following is an assumption that would make the conclusion above logically correct?

- (A) If a government knows about a particular weapons-smuggling incident, it must have intended to use the weapons for its own purposes.
- (B) If a government claims that it knew nothing about a particular weapons-smuggling incident, it must have known everything about it.
- (C) If a government does not permit weapons to enter a country, it is a closed society.
- (D) If a country is a closed society, its government has a large contingent of armed guards patrolling its borders.
- (E) If a country is a closed society, its government has knowledge about everything that occurs in the country.

6. Banning cigarette advertisements in the mass media will not reduce the number of young people who smoke. They know that cigarettes exist and they know how to get them. They do not need the advertisements to supply that information.

The above argument would be most weakened if which of the following were true?

- (A) Seeing or hearing an advertisement for a product tends to increase people's desire for that product.
- (B) Banning cigarette advertisements in the mass media will cause an increase in advertisements in places where cigarettes are sold.
- (C) Advertisements in the mass media have been an exceedingly large part of the expenditures of the tobacco companies.
- (D) Those who oppose cigarette use have advertised against it in the mass media ever since cigarettes were found to be harmful.
- (E) Older people tend to be less influenced by mass-media advertisements than younger people tend to be.

7. People tend to estimate the likelihood of an event's occurrence according to its salience; that is, according to how strongly and how often it comes to their attention.

By placement and headlines, newspapers emphasize stories about local crime over stories about crime elsewhere and about many other major events.

It can be concluded on the basis of the statements above that, if they are true, which of the following is most probably also true?

- (A) The language used in newspaper headlines about local crime is inflammatory and fails to respect the rights of suspects.
- (B) The coverage of international events in newspapers is neglected in favor of the coverage of local events.
- (C) Readers of local news in newspapers tend to overestimate the amount of crime in their own localities relative to the amount of crime in other places.
- (D) None of the events concerning other people that are reported in newspapers is so salient in people's minds as their own personal experiences.
- (E) The press is the news medium that focuses people's attention most strongly on local crimes.

8. By analyzing the garbage of a large number of average-sized households, a group of modern urban anthropologists has found that a household discards less food the more standardized—made up of canned and prepackaged foods—its diet is. The more standardized a household's diet is, however, the greater the quantities of fresh produce the household throws away.

Which of the following can be properly inferred from the passage?

- (A) An increasing number of households rely on a highly standardized diet.
- (B) The less standardized a household's diet is, the more nonfood waste the household discards.
- (C) The less standardized a household's diet is, the smaller is the proportion of fresh produce in the household's food waste.
- (D) The less standardized a household's diet is, the more canned and prepackaged foods the household discards as waste.
- (E) The more fresh produce a household buys, the more fresh produce it throws away.

Questions 9–10 are based on the following.

In the past, teachers, bank tellers, and secretaries were predominantly men; these occupations slipped in pay and status when they became largely occupied by women. Therefore, if women become the majority in currently male-dominated professions like accounting, law, and medicine, the income and prestige of these professions will also drop.

9. The argument above is based on

- (A) another argument that contains circular reasoning
- (B) an attempt to refute a generalization by means of an exceptional case
- (C) an analogy between the past and the future
- (D) an appeal to popular beliefs and values
- (E) an attack on the character of the opposition.

10. Which of the following, if true, would most likely be part of the evidence used to refute the conclusion above?

- (A) Accountants, lawyers, and physicians attained their current relatively high levels of income and prestige at about the same time that the pay and status of teachers, bank tellers, and secretaries slipped.
- (B) When large numbers of men join a female-dominated occupation, such as airline flight attendant, the status and pay of the occupation tend to increase.
- (C) The demand for teachers and secretaries has increased significantly in recent years, while the demand for bank tellers has remained relatively stable.
- (D) If present trends in the awarding of law degrees to women continue, it will be at least two decades before the majority of lawyers are women.
- (E) The pay and status of female accountants, lawyers, and physicians today are governed by significantly different economic and sociological forces than were the pay and status of female teachers, bank tellers, and secretaries in the past.

11. An electric-power company gained greater profits and provided electricity to consumers at lower rates per unit of electricity by building larger-capacity more efficient plants and by stimulating greater use of electricity within its area. To continue these financial trends, the company planned to replace an old plant by a plant with triple the capacity of its largest plant.

The company's plan as described above assumed each of the following EXCEPT:

- (A) Demand for electricity within the company's area of service would increase in the future.
- (B) Expenses would not rise beyond the level that could be compensated for by efficiency or volume of operation, or both.
- (C) The planned plant would be sufficiently reliable in service to contribute a net financial benefit to the company as a whole.
- (D) Safety measures to be instituted for the new plant would be the same as those for the plant it would replace.

- (E) The tripling of capacity would not result in insuperable technological obstacles to efficiency.

Questions 12-13 are based on the following

Meteorologists say that if only they could design an accurate mathematical model of the atmosphere with all its complexities, they could forecast the weather with real precision. But this is an idle boast, immune to any evaluation, for any inadequate weather forecast would obviously be blamed on imperfections in the model.

12. Which of the following, if true, could best be used as a basis for arguing against the author's position that the meteorologists' claim cannot be evaluated?
- (A) Certain unusual configurations of data can serve as the basis for precise weather forecasts even though the exact causal mechanisms are not understood.
  - (B) Most significant gains in the accuracy of the relevant mathematical models are accompanied by clear gains in the precision of weather forecasts.
  - (C) Mathematical models of the meteorological aftermath of such catastrophic events as volcanic eruptions are beginning to be constructed.
  - (D) Modern weather forecasts for as much as a full day ahead are broadly correct about 80 percent of the time.
  - (E) Meteorologists readily concede that the accurate mathematical model they are talking about is not now in their power to construct.
13. Which of the following, if true, would cast the most serious doubt on the meteorologists' boast, aside from the doubt expressed in the passage above?
- (A) The amount of energy that the Earth receives from the Sun is monitored closely and is known not to be constant.
  - (B) Volcanic eruptions, the combustion of fossil fuels, and several other processes that also cannot be quantified with any accuracy are known to have a significant and continuing impact on the constitution of the atmosphere.
  - (C) As current models of the atmosphere are improved, even small increments in complexity will mean large increases in the number of computers required for the representation of the models.
  - (D) Frequent and accurate data about the atmosphere collected at a large number of points both on and above the ground are a prerequisite for the construction of a good model of the atmosphere.
  - (E) With existing models of the atmosphere, large scale weather patterns can be predicted with greater accuracy than can relatively local weather patterns.
14. Of the countries that were the world's twenty largest exporters in 1953, four had the same share of total world exports in 1984 as in 1953. These countries can therefore serve as models for those countries that wish to keep their share of the global export trade stable over the years.
- Which of the following, if true, casts the most serious doubt on the suitability of those four countries as models in the sense described?
- (A) Many countries wish to increase their share of world export trade, not just keep it stable.
  - (B) Many countries are less concerned with exports alone than with the balance between exports and imports.
  - (C) With respect to the mix of products each exports, the four countries are very different from each other.
  - (D) Of the four countries, two had a much larger, and two had a much smaller, share of total world exports in 1970 than in 1984.
  - (E) The exports of the four countries range from 15 percent to 75 percent of the total national output.

Questions 15-16 are based on the following

In the United States, the Postal Service has a monopoly on first-class mail, but much of what is sent first class could be transmitted electronically. Electronic transmittal operators argue that if the Postal Service were to offer electronic transmission, it would have an unfair advantage, since its electronic transmission service could be subsidized from the profits of the monopoly.

15. Which of the following, if each is true, would allay the electronic transmittal operators' fears of unfair competition?
- (A) If the Postal Service were to offer electronic transmission, it could not make a profit on first-class mail.
  - (B) If the Postal Service were to offer electronic transmission, it would have a monopoly on that kind of service.
  - (C) Much of the material that is now sent by first-class mail could be delivered much faster by special package couriers, but is not sent that way because of cost.
  - (D) There is no economy of scale in electronic transmission—that is, the cost per transaction does not go down as more pieces of information are transmitted.
  - (E) Electronic transmission will never be cost-effective for material not sent by first-class mail such as newspapers and bulk mail.
16. Which of the following questions can be answered on the basis of the information in the passage above?
- (A) Is the Postal Service as efficient as privately owned electric transmission services?
  - (B) If private operators were allowed to operate first-class mail services, would they choose to do so?
  - (C) Do the electronic transmittal operators believe that the Postal Service makes a profit on first-class mail?
  - (D) Is the Postal Service prohibited from offering electronic transmission services ?
  - (E) Is the Postal Service expected to have a monopoly on electronic transmission?
17. Lists of hospitals have been compiled showing which hospitals have patient death rates exceeding the national average. The data have been adjusted to allow for differences in the ages of patients.

Each of the following, if true, provides a good logical ground for hospitals to object to interpreting rank on these lists as one of the indices of the quality of hospital care EXCEPT:

- (A) Rank order might indicate insignificant differences, rather than large differences, in numbers of patient deaths.
  - (B) Hospitals that keep patients longer are likely to have higher death rates than those that discharge patients earlier but do not record deaths of patients at home after discharge.
  - (C) Patients who are very old on admission to a hospital are less likely than younger patients to survive the same types of illnesses or surgical procedures.
  - (D) Some hospitals serve a larger proportion of low-income patients, who tend to be more seriously ill when admitted to a hospital.
  - (E) For-profit hospitals sometimes do not provide intensive-care units and other expensive services for very sick patients but refer or transfer such patients to other hospitals.
18. Teresa: Manned spaceflight does not have a future, since it cannot compete economically with other means of accomplishing the objectives of spaceflight.
- Edward: No mode of human transportation has a better record of reliability: two accidents in twenty-five years. Thus manned spaceflight definitely has a positive future.
- Which of the following is the best logical evaluation of Edward's argument as a response to Teresa's argument?
- (A) It cites evidence that, if true, tends to disprove the evidence cited by Teresa in drawing her conclusion.
  - (B) It indicates a logical gap in the support that Teresa offers for her conclusion.



- (C) It raises a consideration that outweighs the argument Teresa makes.
- (D) It does not meet Teresa's point because it assumes that there is no serious impediment to transporting people into space, but this was the issue raised by Teresa.
- (E) It fails to respond to Teresa's argument because it does not address the fundamental issue of whether space activities should have priority over other claims on the national budget.
19. Black Americans are, on the whole, about twice as likely as White Americans to develop high blood pressure. This likelihood also holds for westernized Black Africans when compared to White Africans.
- Researchers have hypothesized that this predisposition in westernized Blacks may reflect an interaction between western high-salt diets and genes that adapted to an environmental scarcity of salt.
- Which of the following statements about present-day, westernized Black Africans, if true, would most tend to confirm the researchers' hypothesis?
- (A) The blood pressures of those descended from peoples situated throughout their history in Senegal and Gambia, where salt was always available, are low.
- (B) The unusually high salt consumption in certain areas of Africa represents a serious health problem.
- (C) Because of their blood pressure levels, most White Africans have markedly decreased their salt consumption.
- (D) Blood pressures are low among the Yoruba, who, throughout their history, have been situated far inland from sources of sea salt and far south of Saharan salt mines.
- (E) No significant differences in salt metabolism have been found between those people who have had salt available throughout their history and those who have not.
20. The following proposal to amend the bylaws of an organization was circulated to its members for comment.
- When more than one nominee is to be named for an office, prospective nominees must consent to nomination and before giving such consent must be told who the other nominees will be.
- Which of the following comments concerning the logic of the proposal is accurate if it cannot be known who the actual nominees are until prospective nominees have given their consent to be nominated?
- (A) The proposal would make it possible for each of several nominees for an office to be aware of who all of the other nominees are.
- (B) The proposal would widen the choice available to those choosing among the nominees.
- (C) If there are several prospective nominees, the proposal would deny the last nominee equal treatment with the first.
- (D) The proposal would enable a prospective nominee to withdraw from competition with a specific person without making that withdrawal known.
- (E) If there is more than one prospective nominee, the proposal would make it impossible for anyone to become a nominee.

**CRITICAL REASONING TEST SECTION 4****30 Minutes    20 Questions**

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

In a survey of job applicants, two-fifths admitted to being at least a little dishonest. However, the survey may underestimate the proportion of job applicants who are dishonest, because——.

- (A) some dishonest people taking the survey might have claimed on the survey to be honest
- (B) some generally honest people taking the survey might have claimed on the survey to be dishonest
- (C) some people who claimed on the survey to be at least a little dishonest may be very dishonest
- (D) some people who claimed on the survey to be dishonest may have been answering honestly

- (E) some people who are not job applicants are probably at least a little dishonest

Questions 2-3 are based on the following.

The average life expectancy for the United States population as a whole is 73.9 years, but children born in Hawaii will live an average of 77 years, and those born in Louisiana, 71.7 years. If a newlywed couple from Louisiana were to begin their family in Hawaii, therefore, their children would be expected to live longer than would be the case if the family remained in Louisiana.

2. Which of the following, if true, would most seriously weaken the conclusion drawn in the passage?
- (A) Insurance company statisticians do not believe that moving to Hawaii will significantly lengthen the average Louisianian's life.
  - (B) The governor of Louisiana has falsely alleged that statistics for his state are inaccurate.
  - (C) The longevity ascribed to Hawaii's current population is attributable mostly to genetically determined factors.
  - (D) Thirty percent of all Louisianians can expect to live longer than 77 years.
  - (E) Most of the Hawaiian Islands have levels of air pollution well below the national average for the United States.
3. Which of the following statements, if true, would most significantly strengthen the conclusion drawn in the passage?
- (A) As population density increases in Hawaii, life expectancy figures for that state are likely to be revised downward.
  - (B) Environmental factors tending to favor longevity are abundant in Hawaii and less numerous in Louisiana.
  - (C) Twenty-five percent of all Louisianians who move to Hawaii live longer than 77 years.
  - (D) Over the last decade, average life expectancy has risen at a higher rate for Louisianians than for Hawaiians.
  - (E) Studies show that the average life expectancy for Hawaiians who move permanently to Louisiana is roughly equal to that of Hawaiians who remain in Hawaii.
4. Insurance Company X is considering issuing a new policy to cover services required by elderly people who suffer from diseases that afflict the elderly. Premiums for the policy must be low enough to attract customers. Therefore, Company X is concerned that the income from the policies would not be sufficient to pay for the claims that would be made.
- Which of the following strategies would be most likely to minimize Company X's losses on the policies?
- (A) Attracting middle-aged customers unlikely to submit claims for benefits for many years
  - (B) Insuring only those individuals who did not suffer any serious diseases as children
  - (C) Including a greater number of services in the policy than are included in other policies of lower cost
  - (D) Insuring only those individuals who were rejected by other companies for similar policies
  - (E) Insuring only those individuals who are wealthy enough to pay for the medical services
5. A program instituted in a particular state allows parents to prepay their children's future college tuition at current rates. The program then pays the tuition annually for the child at any of the state's public colleges in which the child enrolls. Parents should participate in the program as a means of decreasing the cost for their children's college education.
- Which of the following, if true, is the most appropriate reason for parents not to participate in the program?
- (A) The parents are unsure about which public college in the state the child will attend.
  - (B) The amount of money accumulated by putting the prepayment funds in an interest-bearing account today will be greater than the total cost of tuition for any of the public colleges when

the child enrolls.

- (C) The annual cost of tuition at the state's public colleges is expected to increase at a faster rate than the annual increase in the cost of living
- (D) Some of the state's public colleges are contemplating large increases in tuition next year.
- (E) The prepayment plan would not cover the cost of room and board at any of the state's public colleges.

6. Company Alpha buys free-travel coupons from people who are awarded the coupons by Bravo Airlines for flying frequently on Bravo airplanes. The coupons are sold to people who pay less for the coupons than they would pay by purchasing tickets from Bravo. This marketing of coupons results in lost revenue for Bravo.

To discourage the buying and selling of free-travel coupons, it would be best for Bravo Airlines to restrict the

- (A) number of coupons that a person can be awarded in a particular year
- (B) use of the coupons to those who were awarded the coupons and members of their immediate families
- (C) days that the coupons can be used to Monday through Friday
- (D) amount of time that the coupons can be used after they are issued
- (E) number of routes on which travelers can use the coupons

7. The ice on the front windshield of the car had formed when moisture condensed during the night. The ice melted quickly after the car was warmed up the next morning because the defrosting vent, which blows only on the front windshield, was turned on full force.

Which of the following, if true, most seriously jeopardizes the validity of the explanation for the speed with which the ice melted?

- (A) The side windows had no ice condensation on them.
- (B) Even though no attempt was made to defrost the back window, the ice there melted at the same rate as did the ice on the front windshield.
- (C) The speed at which ice on a window melts increases as the temperature of the air blown on the window increases.
- (D) The warm air from the defrosting vent for the front windshield cools rapidly as it dissipates throughout the rest of the car.
- (E) The defrosting vent operates efficiently even when the heater, which blows warm air toward the feet or faces of the driver and passengers, is on.

8. To prevent some conflicts of interest, Congress could prohibit high-level government officials from accepting positions as lobbyists for three years after such officials leave government service. One such official concluded, however, that such a prohibition would be unfortunate because it would prevent high-level government officials from earning a livelihood for three years.

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

- (A) Laws should not restrict the behavior of former government officials.
- (B) Lobbyists are typically people who have previously been high-level government officials.
- (C) Low-level government officials do not often become lobbyists when they leave government service.
- (D) High-level government officials who leave government service are capable of earning a livelihood only as lobbyists.
- (E) High-level government officials who leave government service are currently permitted to act as lobbyists for only three years.

9. A conservation group in the United States is trying to change the long-standing image of bats as frightening creatures. The group contends that bats are feared and persecuted solely because they are shy animals that are active only at night.

Which of the following, if true, would cast the most serious doubt on the accuracy of the

group's contention?

- (A) Bats are steadily losing natural roosting places such as caves and hollow trees and are thus turning to more developed areas for roosting.
- (B) Bats are the chief consumers of nocturnal insects and thus can help make their hunting territory more pleasant for humans.
- (C) Bats are regarded as frightening creatures not only in the United States but also in Europe, Africa, and South America.
- (D) Raccoons and owls are shy and active only at night; yet they are not generally feared and persecuted.
- (E) People know more about the behavior of other greatly feared animal species, such as lions, alligators, and snakes, than they do about the behavior of bats.

10. Meteorite explosions in the Earth's atmosphere as large as the one that destroyed forests in Siberia, with approximately the force of a twelve-megaton nuclear blast, occur about once a century.

The response of highly automated systems controlled by complex computer programs to unexpected circumstances is unpredictable.

Which of the following conclusions can most properly be drawn, if the statements above are true, about a highly automated nuclear-missile defense system controlled by a complex computer program?

- (A) Within a century after its construction, the system would react inappropriately and might accidentally start a nuclear war.
- (B) The system would be destroyed if an explosion of a large meteorite occurred in the Earth's atmosphere.
- (C) It would be impossible for the system to distinguish the explosion of a large meteorite from the explosion of a nuclear weapon.
- (D) Whether the system would respond inappropriately to the explosion of a large meteorite would depend on the location of the blast.
- (E) It is not certain what the system's response to the explosion of a large meteorite would be, if its designers did not plan for such a contingency.

Questions 11-12 are based on the following.

The fewer restrictions there are on the advertising of legal services, the more lawyers there are who advertise their services, and the lawyers who advertise a specific service usually charge less for that service than lawyers who do not advertise. Therefore, if the state removes any of its current restrictions, such as the one against advertisements that do not specify fee arrangements, overall consumer legal costs will be lower than if the state retains its current restrictions.

11. If the statements above are true, which of the following must be true?

- (A) Some lawyers who now advertise will charge more for specific services if they do not have to specify fee arrangements in the advertisements.
- (B) More consumers will use legal services if there are fewer restrictions on the advertising of legal services.
- (C) If the restriction against advertisements that do not specify fee arrangements is removed, more lawyers will advertise their services.
- (D) If more lawyers advertise lower prices for specific services, some lawyers who do not advertise will also charge less than they currently charge for those services.
- (E) If the only restrictions on the advertising of legal services were those that apply to every type of advertising, most lawyers would advertise their services.

12. Which of the following, if true, would most seriously weaken the argument concerning overall consumer legal costs?

- (A) The state has recently removed some other restrictions that had limited the advertising of

legal services.

- (B) The state is unlikely to remove all of the restrictions that apply solely to the advertising of legal services.
  - (C) Lawyers who do not advertise generally provide legal services of the same quality as those provided by lawyers who do advertise.
  - (D) Most lawyers who now specify fee arrangements in their advertisements would continue to do so even if the specification were not required.
  - (E) Most lawyers who advertise specific services do not lower their fees for those services when they begin to advertise.
13. Defense Department analysts worry that the ability of the United States to wage a prolonged war would be seriously endangered if the machine-tool manufacturing base shrinks further. Before the Defense Department publicly connected this security issue with the import quota issue, however, the machine-tool industry raised the national security issue in its petition for import quotas.

Which of the following, if true, contributes most to an explanation of the machine-tool industry's raising the issue above regarding national security?

- (A) When the aircraft industries retooled, they provided a large amount of work for tool builders.
  - (B) The Defense Department is only marginally concerned with the effects of foreign competition on the machine-tool industry.
  - (C) The machine-tool industry encountered difficulty in obtaining governmental protection against imports on grounds other than defense.
  - (D) A few weapons important for defense consist of parts that do not require extensive machining.
  - (E) Several federal government programs have been designed which will enable domestic machine-tool manufacturing firms to compete successfully with foreign toolmakers.
14. Opponents of laws that require automobile drivers and passengers to wear seat belts argue that in a free society people have the right to take risks as long as the people do not harm others as a result of taking the risks. As a result, they conclude that it should be each person's decision whether or not to wear a seat belt.

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

- (A) Many new cars are built with seat belts that automatically fasten when someone sits in the front seat.
  - (B) Automobile insurance rates for all automobile owners are higher because of the need to pay for the increased injuries or deaths of people not wearing seat belts.
  - (C) Passengers in airplanes are required to wear seat belts during takeoffs and landings.
  - (D) The rate of automobile fatalities in states that do not have mandatory seat-belt laws is greater than the rate of fatalities in states that do have such laws.
  - (E) In automobile accidents, a greater number of passengers who do not wear seat belts are injured than are passengers who do wear seat belts.
15. The cost of producing radios in Country Q is ten percent less than the cost of producing radios in Country Y. Even after transportation fees and tariff charges are added, it is still cheaper for a company to import radios from Country Q to Country Y than to produce radios in Country Y.

The statements above, if true, best support which of the following assertions?

- (A) Labor costs in Country Q are ten percent below those in Country Y.
- (B) Importing radios from Country Q to Country Y will eliminate ten percent of the manufacturing jobs in Country Y.
- (C) The tariff on a radio imported from Country Q to Country Y is less than ten percent of the cost of manufacturing the radio in Country Y.
- (D) The fee for transporting a radio from Country Q to Country Y is more than ten percent of the cost of manufacturing the radio in Country Q.
- (E) It takes ten percent less time to manufacture a radio in Country Q than it does in Country Y.

16. During the Second World War, about 375,000 civilians died in the United States and about 408,000 members of the United States armed forces died overseas. On the basis of those figures, it can be concluded that it was not much more dangerous to be overseas in the armed forces during the Second World War than it was to stay at home as a civilian.

Which of the following would reveal most clearly the absurdity of the conclusion drawn above?

- (A) Counting deaths among members of the armed forces who served in the United States in addition to deaths among members of the armed forces serving overseas
  - (B) Expressing the difference between the numbers of deaths among civilians and members of the armed forces as a percentage of the total number of deaths
  - (C) Separating deaths caused by accidents during service in the armed forces from deaths caused by combat injuries
  - (D) Comparing death rates per thousand members of each group rather than comparing total numbers of deaths
  - (E) Comparing deaths caused by accidents in the United States to deaths caused by combat in the armed forces.
17. 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.
18. The average age of chief executive officers (CEO's) in a large sample of companies is 57. The average age of CEO's in those same companies 20 years ago was approximately eight years younger. On the basis of those data, it can be concluded that CEO's in general tend to be older now.

Which of the following casts the most doubt on the conclusion drawn above?

- (A) The dates when the CEO's assumed their current positions have not been specified.
- (B) No information is given concerning the average number of years that CEO's remain in office.
- (C) The information is based only on companies that have been operating for at least 20 years.
- (D) Only approximate information is given concerning the average age of the CEO's 20 years ago.
- (E) Information concerning the exact number of companies in the sample has not been given.

Questions 19-20 are based on the following.

Surveys show that every year only 10 percent of cigarette smokers switch brands. Yet the manufacturers have been spending an amount equal to 10 percent of their gross receipts on cigarette promotion in magazines. It follows from these figures that inducing cigarette smokers to switch brands did not pay, and that cigarette companies would have been no worse off economically if they had dropped their advertising.

19. Of the following, the best criticism of the conclusion that inducing cigarette smokers to switch brands did not pay is that the conclusion is based on
- (A) computing advertising costs as a percentage of gross receipts, not of overall costs
  - (B) past patterns of smoking and may not carry over to the future
  - (C) the assumption that each smoker is loyal to a single brand of cigarettes at any one time
  - (D) the assumption that each manufacturer produces only one brand of cigarettes
  - (E) figures for the cigarette industry as a whole and may not hold for a particular company
20. Which of the following, if true, most seriously weakens the conclusion that cigarette companies could have dropped advertising without suffering economically?
- (A) Cigarette advertisements provide a major proportion of total advertising revenue for numerous magazines.
  - (B) Cigarette promotion serves to attract first-time smokers to replace those people who have stopped smoking.
  - (C) There exists no research conclusively demonstrating that increases in cigarette advertising are related to increases in smoking.
  - (D) Advertising is so firmly established as a major business activity of cigarette manufacturers that they would be unlikely to drop it.
  - (E) Brand loyalty is typically not very strong among those who smoke inexpensive cigarettes.

**CRITICAL REASONING TEST SECTION 5****30 MINUTES 20 QUESTIONS**

1. Toughened hiring standards have not been the primary cause of the present staffing shortage in public schools. The shortage of teachers is primarily caused by the fact that in recent years teachers have not experienced any improvements in working conditions and their salaries have not kept pace with salaries in other professions.

Which of the following, if true, would most support the claims above?

- (A) Many teachers already in the profession would not have been hired under the new hiring standards.
  - (B) Today more teachers are entering the profession with a higher educational level than in the past.
  - (C) Some teachers have cited higher standards for hiring as a reason for the current staffing shortage.
  - (D) Many teachers have cited low pay and lack of professional freedom as reasons for their leaving the profession.
  - (E) Many prospective teachers have cited the new hiring standards as a reason for not entering the profession.
2. A proposed ordinance requires the installation in new homes of sprinklers automatically triggered by the presence of a fire. However, a home builder argued that because more than ninety percent of residential fires are extinguished by a household member, residential sprinklers would only marginally decrease property damage caused by residential fires.
- Which of the following, if true, would most seriously weaken the home builder's argument?
- (A) Most individuals have no formal training in how to extinguish fires.
  - (B) Since new homes are only a tiny percentage of available housing in the city, the new ordinance would be extremely narrow in scope.
  - (C) The installation of smoke detectors in new residences costs significantly less than the installation of sprinklers.
  - (D) In the city where the ordinance was proposed, the average time required by the fire department to respond to a fire was less than the national average.
  - (E) The largest proportion of property damage that results from residential fires is caused by fires that start when no household member is present.

3. Even though most universities retain the royalties from faculty members' inventions, the faculty members retain the royalties from books and articles they write. Therefore, faculty members should retain the royalties from the educational computer software they develop.

The conclusion above would be more reasonably drawn if which of the following were inserted into the argument as an additional premise?

- (A) Royalties from inventions are higher than royalties from educational software programs.
  - (B) Faculty members are more likely to produce educational software programs than inventions.
  - (C) Inventions bring more prestige to universities than do books and articles.
  - (D) In the experience of most universities, educational software programs are more marketable than are books and articles.
  - (E) In terms of the criteria used to award royalties, educational software programs are more nearly comparable to books and articles than to inventions.
4. Increases in the level of high-density lipoprotein (HDL) in the human bloodstream lower bloodstream-cholesterol levels by increasing the body's capacity to rid itself of excess cholesterol. Levels of HDL in the bloodstream of some individuals are significantly increased by a program of regular exercise and weight reduction.

Which of the following can be correctly inferred from the statements above?

- (A) Individuals who are underweight do not run any risk of developing high levels of cholesterol in the bloodstream.
  - (B) Individuals who do not exercise regularly have a high risk of developing high levels of cholesterol in the bloodstream late in life.
  - (C) Exercise and weight reduction are the most effective methods of lowering bloodstream cholesterol levels in humans.
  - (D) A program of regular exercise and weight reduction lowers cholesterol levels in the bloodstream of some individuals.
  - (E) Only regular exercise is necessary to decrease cholesterol levels in the bloodstream of individuals of average weight.
5. When limitations were in effect on nuclear-arms testing, people tended to save more of their money, but when nuclear-arms testing increased, people tended to spend more of their money. The perceived threat of nuclear catastrophe, therefore, decreases the willingness of people to postpone consumption for the sake of saving money.

The argument above assumes that

- (A) the perceived threat of nuclear catastrophe has increased over the years.
  - (B) most people supported the development of nuclear arms
  - (C) people's perception of the threat of nuclear catastrophe depends on the amount of nuclear-arms testing being done
  - (D) the people who saved the most money when nuclear-arms testing was limited were the ones who supported such limitations
  - (E) there are more consumer goods available when nuclear-arms testing increases
6. Which of the following best completes the passage below?

People buy prestige when they buy a premium product. They want to be associated with something special. Mass-marketing techniques and price-reduction strategies should not be used because \_\_\_\_\_.

- (A) affluent purchasers currently represent a shrinking portion of the population of all purchasers
- (B) continued sales depend directly on the maintenance of an aura of exclusivity
- (C) purchasers of premium products are concerned with the quality as well as with the price of the products
- (D) expansion of the market niche to include a broader spectrum of consumers will increase profits



- (E) manufacturing a premium brand is not necessarily more costly than manufacturing a standard brand of the same product
7. A cost-effective solution to the problem of airport congestion is to provide high-speed ground transportation between major cities lying 200 to 500 miles apart. The successful implementation of this plan would cost far less than expanding existing airports and would also reduce the number of airplanes clogging both airports and airways.
- Which of the following, if true, could proponents of the plan above most appropriately cite as a piece of evidence for the soundness of their plan?
- (A) An effective high-speed ground-transportation system would require major repairs to many highways and mass-transit improvements.
- (B) One-half of all departing flights in the nation's busiest airport head for a destination in a major city 225 miles away.
- (C) The majority of travelers departing from rural airports are flying to destinations in cities over 600 miles away.
- (D) Many new airports are being built in areas that are presently served by high-speed ground-transportation systems.
- (E) A large proportion of air travelers are vacationers who are taking long-distance flights.

Questions 8-9 are based on the following.

If there is an oil-supply disruption resulting in higher international oil prices, domestic oil prices in open-market countries such as the United States will rise as well, whether such countries import all or none of their oil.

8. If the statement above concerning oil-supply disruptions is true, which of the following policies in an open-market nation is most likely to reduce the long-term economic impact on that nation of sharp and unexpected increases in international oil prices?
- (A) Maintaining the quantity of oil imported at constant yearly levels
- (B) Increasing the number of oil tankers in its fleet
- (C) Suspending diplomatic relations with major oil-producing nations
- (D) Decreasing oil consumption through conservation
- (E) Decreasing domestic production of oil
9. Which of the following conclusions is best supported by the statement above?
- (A) Domestic producers of oil in open-market countries are excluded from the international oil market when there is a disruption in the international oil supply.
- (B) International oil-supply disruptions have little, if any, effect on the price of domestic oil as long as an open-market country has domestic supplies capable of meeting domestic demand.
- (C) The oil market in an open-market country is actually part of the international oil market, even if most of that country's domestic oil is usually sold to consumers within its borders.
- (D) Open-market countries that export little or none of their oil can maintain stable domestic oil prices even when international oil prices rise sharply.
- (E) If international oil prices rise, domestic distributors of oil in open-market countries will begin to import more oil than they export.
10. The average normal infant born in the United States weighs between twelve and fourteen pounds at the age of three months. Therefore, if a three-month-old child weighs only ten pounds, its weight gain has been below the United States average.
- Which of the following indicates a flaw in the reasoning above?
- (A) Weight is only one measure of normal infant development.
- (B) Some three-month-old children weigh as much as seventeen pounds.
- (C) It is possible for a normal child to weigh ten pounds at birth.
- (D) The phrase "below average" does not necessarily mean insufficient.

- (E) Average weight gain is not the same as average weight.
11. Red blood cells in which the malarial-fever parasite resides are eliminated from a person's body after 120 days. Because the parasite cannot travel to a new generation of red blood cells, any fever that develops in a person more than 120 days after that person has moved to a malaria-free region is not due to the malarial parasite.

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

- (A) The fever caused by the malarial parasite may resemble the fever caused by flu viruses.  
 (B) The anopheles mosquito, which is the principal insect carrier of the malarial parasite, has been eradicated in many parts of the world.  
 (C) Many malarial symptoms other than the fever, which can be suppressed with antimalarial medication, can reappear within 120 days after the medication is discontinued.  
 (D) In some cases, the parasite that causes malarial fever travels to cells of the spleen, which are less frequently eliminated from a person's body than are red blood cells.  
 (E) In any region infested with malaria-carrying mosquitoes, there are individuals who appear to be immune to malaria.
12. Fact 1: Television advertising is becoming less effective: the proportion of brand names promoted on television that viewers of the advertising can recall is slowly decreasing.
- Fact 2: Television viewers recall commercials aired first or last in a cluster of consecutive commercials far better than they recall commercials aired somewhere in the middle.
- Fact 2 would be most likely to contribute to an explanation of fact 1 if which of the following were also true?
- (A) The average television viewer currently recalls fewer than half the brand names promoted in commercials he or she saw.  
 (B) The total time allotted to the average cluster of consecutive television commercials is decreasing.  
 (C) The average number of hours per day that people spend watching television is decreasing.  
 (D) The average number of clusters of consecutive commercials per hour of television is increasing.  
 (E) The average number of television commercials in a cluster of consecutive commercials is increasing.
13. The number of people diagnosed as having a certain intestinal disease has dropped significantly in a rural county this year, as compared to last year. Health officials attribute this decrease entirely to improved sanitary conditions at water-treatment plants, which made for cleaner water this year and thus reduced the incidence of the disease.
- Which of the following, if true, would most seriously weaken the health officials' explanation for the lower incidence of the disease?
- (A) Many new water-treatment plants have been built in the last five years in the rural county.  
 (B) Bottled spring water has not been consumed in significantly different quantities by people diagnosed as having the intestinal disease, as compared to people who did not contract the disease.  
 (C) Because of a new diagnostic technique, many people who until this year would have been diagnosed as having the intestinal disease are now correctly diagnosed as suffering from intestinal ulcers.  
 (D) Because of medical advances this year, far fewer people who contract the intestinal disease will develop severe cases of the disease.  
 (E) The water in the rural county was brought up to the sanitary standards of the water in neighboring counties ten years ago.
14. The price the government pays for standard weapons purchased from military contractors is determined by a pricing method called "historical costing." Historical costing allows contractors to protect their profits by adding a percentage increase, based on the current rate of inflation, to the previous year's contractual price.

Which of the following statements, if true, is the best basis for a criticism of historical costing

as an economically sound pricing method for military contracts?

- (A) The government might continue to pay for past inefficient use of funds.
  - (B) The rate of inflation has varied considerably over the past twenty years.
  - (C) The contractual price will be greatly affected by the cost of materials used for the products.
  - (D) Many taxpayers question the amount of money the government spends on military contracts.
  - (E) The pricing method based on historical costing might not encourage the development of innovative weapons.
15. Some who favor putting governmental enterprises into private hands suggest that conservation objectives would in general be better served if private environmental groups were put in charge of operating and financing the national park system, which is now run by the government.

Which of the following, assuming that it is a realistic possibility, argues most strongly against the suggestion above?

- (A) Those seeking to abolish all restrictions on exploiting the natural resources of the parks might join the private environmental groups as members and eventually take over their leadership.
  - (B) Private environmental groups might not always agree on the best ways to achieve conservation objectives.
  - (C) If they wished to extend the park system, the private environmental groups might have to seek contributions from major donors and the general public.
  - (D) There might be competition among private environmental groups for control of certain park areas.
  - (E) Some endangered species, such as the California condor, might die out despite the best efforts of the private environmental groups, even if those groups are not hampered by insufficient resources.
16. A recent spate of launching and operating mishaps with television satellites led to a corresponding surge in claims against companies underwriting satellite insurance. As a result, insurance premiums shot up, making satellites more expensive to launch and operate. This, in turn, has added to the pressure to squeeze more performance out of currently operating satellites.

Which of the following, if true, taken together with the information above, best supports the conclusion that the cost of television satellites will continue to increase?

- (A) Since the risk to insurers of satellites is spread over relatively few units, insurance premiums are necessarily very high.
  - (B) When satellites reach orbit and then fail, the causes of failure are generally impossible to pinpoint with confidence.
  - (C) The greater the performance demands placed on satellites, the more frequently those satellites break down.
  - (D) Most satellites are produced in such small numbers that no economies of scale can be realized.
  - (E) Since many satellites are built by unwieldy international consortia, inefficiencies are inevitable.
17. Tocqueville, a nineteenth-century writer known for his study of democracy in the United States, believed that a government that centralizes power in one individual or institution is dangerous to its citizens. Biographers claim that Tocqueville disliked centralized government because he blamed Napoleon's rule for the poverty of his childhood in Normandy.

Which of the following, if true, would cast the most serious doubt on the biographers' claim?

- (A) Although Napoleon was popularly blamed at the time for the terrible living conditions in Normandy, historians now know that bad harvests were really to blame for the poor economic conditions.
- (B) Napoleon was notorious for refusing to share power with any of his political associates.
- (C) Tocqueville said he knew that if his father had not suffered ill health, his family would have had a steady income and a comfortable standard of living.
- (D) Although Tocqueville asserted that United States political life was democratic, the United

States of the nineteenth century allowed political power to be concentrated in a few institutions.

- (E) Tocqueville once wrote in a letter that, although his childhood was terribly impoverished, it was not different from the experience of his friends and neighbors in Normandy.

18. Radio interferometry is a technique for studying details of celestial objects that combines signals intercepted by widely spaced radio telescopes. This technique requires ultraprecise timing, exact knowledge of the locations of the telescopes, and sophisticated computer programs. The successful interferometric linking of an Earth-based radio telescope with a radio telescope on an orbiting satellite was therefore a significant technological accomplishment.

Which of the following can be correctly inferred from the statements above?

- (A) Special care was taken in the launching of the satellite so that the calculations of its orbit would be facilitated.  
(B) The signals received on the satellite are stronger than those received by a terrestrial telescope.  
(C) The resolution of detail achieved by the satellite-Earth interferometer system is inferior to that achieved by exclusively terrestrial systems.  
(D) The computer programs required for making use of the signals received by the satellite required a long time for development.  
(E) The location of an orbiting satellite relative to locations on Earth can be well enough known for interferometric purposes.
19. Recent estimates predict that between 1982 and 1995 the greatest increase in the number of people employed will be in the category of low-paying service occupations. This category, however, will not increase its share of total employment, whereas the category of high-paying service occupations will increase its share.

If the estimates above are accurate, which of the following conclusions can be drawn?

- (A) In 1982 more people were working in low-paying service occupations than were working in high-paying service occupations.  
(B) In 1995 more people will be working in high-paying service occupations than will be working in low-paying service occupations.  
(C) Nonservice occupations will account for the same share of total employment in 1995 as in 1982.  
(D) Many of the people who were working in low-paying service occupations in 1982 will be working in high-paying service occupations by 1995.  
(E) The rate of growth for low-paying service occupations will be greater than the overall rate of employment growth between 1982 and 1995.
20. For a local government to outlaw all strikes by its workers is a costly mistake, because all its labor disputes must then be settled by binding arbitration, without any negotiated public-sector labor settlements guiding the arbitrators. Strikes should be outlawed only for categories of public-sector workers for whose services no acceptable substitute exists.

The statements above best support which of the following conclusions?

- (A) Where public-service workers are permitted to strike, contract negotiations with those workers are typically settled without a strike.  
(B) Where strikes by all categories of public-sector workers are outlawed, no acceptable substitutes for the services provided by any of those workers are available.  
(C) Binding arbitration tends to be more advantageous for public-service workers where it is the only available means of settling labor disputes with such workers.  
(D) Most categories of public-sector workers have no counterparts in the private sector.  
(E) A strike by workers in a local government is unlikely to be settled without help from an arbitrator.

## CRITICAL REASONING TEST SECTION 6

30 MINUTES 20 QUESTIONS

1. Rural households have more purchasing power than do urban or suburban households at the same income level, since some of the income urban and suburban households use for food and

shelter can be used by rural households for other needs.

Which of the following inferences is best supported by the statement made above?

- (A) The average rural household includes more people than does the average urban or suburban household.
- (B) Rural households have lower food and housing costs than do either urban or suburban households.
- (C) Suburban households generally have more purchasing power than do either rural or urban households.
- (D) The median income of urban and suburban households is generally higher than that of rural households.
- (E) All three types of households spend more of their income on food and housing than on all other purchases combined.

2. In 1985 state border colleges in Texas lost the enrollment of more than half, on average, of the Mexican nationals they had previously served each year. Teaching faculties have alleged that this extreme drop resulted from a rise in tuition for international and out-of-state students from \$40 to \$120 per credit hour.

Which of the following, if feasible, offers the best prospects for alleviating the problem of the drop in enrollment of Mexican nationals as the teaching faculties assessed it?

- (A) Providing grants-in-aid to Mexican nationals to study in Mexican universities
- (B) Allowing Mexican nationals to study in Texas border colleges and to pay in-state tuition rates, which are the same as the previous international rate
- (C) Reemphasizing the goals and mission of the Texas state border colleges as serving both in-state students and Mexican nationals
- (D) Increasing the financial resources of Texas colleges by raising the tuition for in-state students attending state institutions
- (E) Offering career counseling for those Mexican nationals who graduate from state border colleges and intend to return to Mexico

3. Affirmative action is good business. So asserted the National Association of Manufacturers while urging retention of an executive order requiring some federal contractors to set numerical goals for hiring minorities and women. "Diversity in work force participation has produced new ideas in management, product development, and marketing," the association claimed.

The association's argument as it is presented in the passage above would be most strengthened if which of the following were true?

- (A) The percentage of minority and women workers in business has increased more slowly than many minority and women's groups would prefer.
- (B) Those businesses with the highest percentages of minority and women workers are those that have been the most innovative and profitable
- (C) Disposable income has been rising as fast among minorities and women as among the population as a whole.
- (D) The biggest growth in sales in the manufacturing sector has come in industries that market the most innovative products.
- (E) Recent improvements in management practices have allowed many manufacturers to experience enormous gains in worker productivity.

Questions 4-5 refer to the following.

If the airspace around centrally located airports were restricted to commercial airliners and only those private planes equipped with radar, most of the private-plane traffic would be forced to use outlying airfields. Such a reduction in the amount of private-plane traffic would reduce the risk of midair collision around the centrally located airports.

4. The conclusion drawn in the first sentence depends on which of the following assumptions?

- (A) Outlying airfields would be as convenient as centrally located airports for most pilots of private planes.
- (B) Most outlying airfields are not equipped to handle commercial-airline traffic.
- (C) Most private planes that use centrally located airports are not equipped with radar.
- (D) Commercial airliners are at greater risk of becoming involved in midair collisions than are private planes.
- (E) A reduction in the risk of midair collision would eventually lead to increases in commercial-airline traffic.
5. Which of the following, if true, would most strengthen the conclusion drawn in the second sentence?
- (A) Commercial airliners are already required by law to be equipped with extremely sophisticated radar systems.
- (B) Centrally located airports are experiencing over-crowded airspace primarily because of sharp increases in commercial-airline traffic.
- (C) Many pilots of private planes would rather buy radar equipment than be excluded from centrally located airports.
- (D) The number of midair collisions that occur near centrally located airports has decreased in recent years.
- (E) Private planes not equipped with radar systems cause a disproportionately large number of midair collisions around centrally located airports.
6. Which of the following best completes the passage below?
- Established companies concentrate on defending what they already have. Consequently, they tend not to be innovative themselves and tend to underestimate the effects of the innovations of others. The clearest example of this defensive strategy is the fact that.....
- (A) ballpoint pens and soft-tip markers have eliminated the traditional market for fountain pens, clearing the way for the marketing of fountain pens as luxury or prestige items
- (B) a highly successful automobile was introduced by the same company that had earlier introduced a model that had been a dismal failure
- (C) a once-successful manufacturer of slide rules reacted to the introduction of electronic calculators by trying to make better slide rules
- (D) one of the first models of modern accounting machines, designed for use in the banking industry, was purchased by a public library as well as by banks
- (E) the inventor of a commonly used anesthetic did not intend the product to be used by dentists, who currently account for almost the entire market for that drug
7. Most archaeologists have held that people first reached the Americas less than 20,000 years ago by crossing a land bridge into North America. But recent discoveries of human shelters in South America dating from 32,000 years ago have led researchers to speculate that people arrived in South America first, after voyaging across the Pacific, and then spread northward.
- Which of the following, if it were discovered, would be pertinent evidence against the speculation above?
- (A) A rock shelter near Pittsburgh, Pennsylvania, contains evidence of use by human beings 19,000 years ago.
- (B) Some North American sites of human habitation predate any sites found in South America.
- (C) The climate is warmer at the 32,000-year-old south American site than at the oldest known North American site.
- (D) The site in South America that was occupied 32,000 years ago was continuously occupied until 6,000 years ago.
- (E) The last Ice Age, between 11,500 and 20,000 years ago, considerably lowered worldwide sea levels.
8. In Asia, where palm trees are non-native, the trees' flowers have traditionally been pollinated by hand, which has kept palm fruit productivity unnaturally low. When weevils known to be

efficient pollinators of palm flowers were introduced into Asia in 1980, palm fruit productivity increased—by up to fifty percent in some areas—but then decreased sharply in 1984.

Which of the following statements, if true, would best explain the 1984 decrease in productivity?

- (A) Prices for palm fruit fell between 1980 and 1984 following the rise in production and a concurrent fall in demand.
  - (B) Imported trees are often more productive than native trees because the imported ones have left behind their pests and diseases in their native lands.
  - (C) Rapid increases in productivity tend to deplete trees of nutrients needed for the development of the fruit-producing female flowers.
  - (D) The weevil population in Asia remained at approximately the same level between 1980 and 1984.
  - (E) Prior to 1980 another species of insect pollinated the Asian palm trees, but not as efficiently as the species of weevil that was introduced in 1980.
9. Since the mayor's publicity campaign for Greenville's bus service began six months ago, morning automobile traffic into the midtown area of the city has decreased seven percent. During the same period, there has been an equivalent rise in the number of persons riding buses into the midtown area. Obviously, the mayor's publicity campaign has convinced many people to leave their cars at home and ride the bus to work..

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

- (A) Fares for all bus routes in Greenville have risen an average of five percent during the past six months.
  - (B) The mayor of Greenville rides the bus to City Hall in the city's midtown area.
  - (C) Road reconstruction has greatly reduced the number of lanes available to commuters in major streets leading to the midtown area during the past six months.
  - (D) The number of buses entering the midtown area of Greenville during the morning hours is exactly the same now as it was one year ago.
  - (E) Surveys show that longtime bus riders are no more satisfied with the Greenville bus service than they were before the mayor's publicity campaign began.
10. In the aftermath of a worldwide stock-market crash, Country T claimed that the severity of the stock-market crash it experienced resulted from the accelerated process of denationalization many of its industries underwent shortly before the crash.

Which of the following, if it could be carried out, would be most useful in an evaluation of Country T's assessment of the causes of the severity of its stock-market crash?

- (A) Calculating the average loss experienced by individual traders in Country T during the crash
  - (B) Using economic theory to predict the most likely date of the next crash in Country T
  - (C) Comparing the total number of shares sold during the worst days of the crash in Country T to the total number of shares sold in Country T just prior to the crash.
  - (D) Comparing the severity of the crash in Country T to the severity of the crash in countries otherwise economically similar to Country T that have not experienced recent denationalization
  - (E) Comparing the long-term effects of the crash on the purchasing power of the currency of Country T to the immediate, more severe short-term effects of the crash on the purchasing power of the currency of Country T
11. With the emergence of biotechnology companies, it was feared that they would impose silence about proprietary results on their in-house researchers and their academic consultants. This constraint, in turn, would slow the development of biological science and engineering.

Which of the following, if true, would tend to weaken most seriously the prediction of scientific secrecy described above?

- (A) Biotechnological research funded by industry has reached some conclusions that are of major scientific importance.
- (B) When the results of scientific research are kept secret, independent researchers are unable to build on those results.

- (C) Since the research priorities of biotechnology companies are not the same as those of academic institutions, the financial support of research by such companies distorts the research agenda.
- (D) To enhance the companies' standing in the scientific community, the biotechnology companies encourage employees to publish their results, especially results that are important.
- (E) Biotechnology companies devote some of their research resources to problems that are of fundamental scientific importance and that are not expected to produce immediate practical applications.
12. Some people have questioned the judge's objectivity in cases of sex discrimination against women. But the record shows that in sixty percent of such cases, the judge has decided in favor of the women. This record demonstrates that the judge has not discriminated against women in cases of sex discrimination against women.
- The argument above is flawed in that it ignores the possibility that
- (A) a large number of the judge's cases arose out of allegations of sex discrimination against women
- (B) many judges find it difficult to be objective in cases of sex discrimination against women
- (C) the judge is biased against women defendants or plaintiffs in cases that do not involve sex discrimination
- (D) the majority of the cases of sex discrimination against women that have reached the judge's court have been appealed from a lower court
- (E) the evidence shows that the women should have won in more than sixty percent of the judge's cases involving sex discrimination against women
13. The tobacco industry is still profitable and projections are that it will remain so. In the United States this year, the total amount of tobacco sold by tobacco-farmers has increased, even though the number of adults who smoke has decreased.
- Each of the following, if true, could explain the simultaneous increase in tobacco sales and decrease in the number of adults who smoke EXCEPT.
- (A) During this year, the number of women who have begun to smoke is greater than the number of men who have quit smoking.
- (B) The number of teen-age children who have begun to smoke this year is greater than the number of adults who have quit smoking during the same period.
- (C) During this year, the number of nonsmokers who have begun to use chewing tobacco or snuff is greater than the number of people who have quit smoking.
- (D) The people who have continued to smoke consume more tobacco per person than they did in the past.
- (E) More of the cigarettes made in the United States this year were exported to other countries than was the case last year.
14. Kale has more nutritional value than spinach. But since collard greens have more nutritional value than lettuce, it follows that kale has more nutritional value than lettuce.
- Any of the following, if introduced into the argument as an additional premise, makes the argument above logically correct EXCEPT:
- (A) Collard greens have more nutritional value than kale.
- (B) Spinach has more nutritional value than lettuce.
- (C) Spinach has more nutritional value than collard greens.
- (D) Spinach and collard greens have the same nutritional value.
- (E) Kale and collard greens have the same nutritional value.
15. On the basis of a decrease in the college-age population, many colleges now anticipate increasingly smaller freshman classes each year. Surprised by a 40 percent increase in qualified applicants over the previous year, however, administrators at Nice College now plan to hire more faculty for courses taken by all freshmen.



Which of the following statements about Nice College's current qualified applicants, if true, would strongly suggest that the administrators' plan is flawed?

- (A) A substantially higher percentage than usual plan to study for advanced degrees after graduation from college.
- (B) According to their applications, their level of participation in extracurricular activities and varsity sports is unusually high.
- (C) According to their applications, none of them lives in a foreign country.
- (D) A substantially lower percentage than usual rate Nice College as their first choice among the colleges to which they are applying.
- (E) A substantially lower percentage than usual list mathematics as their intended major.

Questions 16-17 are based on the following.

A researcher discovered that people who have low levels of immune-system activity tend to score much lower on tests of mental health than do people with normal or high immune-system activity. The researcher concluded from this experiment that the immune system protects against mental illness as well as against physical disease.

16. The researcher's conclusion depends on which of the following assumptions?

- (A) High immune-system activity protects against mental illness better than normal immune-system activity does.
- (B) Mental illness is similar to physical disease in its effects on body system.
- (C) People with high immune-system activity cannot develop mental illness.
- (D) Mental illness does not cause people's immune-system activity to decrease.
- (E) Psychological treatment of mental illness is not as effective as is medical treatment.

17. The researcher's conclusion would be most seriously weakened if it were true that

- (A) there was a one-year delay between the completion of a pilot study for the experiment and the initiation of the experiment itself
- (B) people's levels of immune-system activity are not affected by their use of medications
- (C) a few people with high immune-system activity had scores on the test of mental health that were similar to the scores of people who had normal immune-system activity
- (D) people who have low immune-system activity tend to contract more viral infections than do people with normal or high immune-system activity
- (E) high levels of stress first cause mental illness and then cause decreased immune-system activity in normal individuals

18. The value of a product is determined by the ratio of its quality to its price. The higher the value of a product, the better will be its competitive position. Therefore, either increasing the quality or lowering the price of a given product will increase the likelihood that consumer will select that product rather than a competing one.

Which of the following, if true, would most strengthen the conclusion drawn above?

- (A) It is possible to increase both the quality and the price of a product without changing its competitive position.
- (B) For certain segments of the population of consumers, higher-priced brands of some product lines are preferred to the lower-priced brands.
- (C) Competing products often try to appeal to different segments of the population of consumers.
- (D) The competitive position of a product can be affected by such factors as advertising and brand loyalty.
- (E) Consumers' perceptions of the quality of a product are based on the actual quality of the product.

19. In January there was a large drop in the number of new houses sold, because interest rates for mortgages were falling and many consumers were waiting to see how low the rates would go.

This large sales drop was accompanied by a sharp rise in the average price of new houses sold. Which of the following, if true, best explains the sharp rise in the average price of new houses?

- (A) Sales of higher-priced houses were unaffected by the sales drop because their purchasers have fewer constraints limiting the total amount they pay.
  - (B) Labor agreements of builders with construction unions are not due to expire until the next January.
  - (C) The prices of new houses have been rising slowly over the past three years because there is an increasing shortage of housing.
  - (D) There was a greater amount of moderate-priced housing available for resale by owners during January than in the preceding three months.
  - (E) Interest rates for home mortgages are expected to rise sharply later in the year if predictions of increased business activity in general prove to be accurate.
20. Seven countries signed a treaty binding each of them to perform specified actions on a certain fixed date, with the actions of each conditional on simultaneous action taken by the other countries. Each country was also to notify the six other countries when it had completed its action.

The simultaneous-action provision of the treaty leaves open the possibility that

- (A) the compliance date was subject to postponement, according to the terms of the treaty
- (B) one of the countries might not be required to make any changes or take any steps in order to comply with the treaty, whereas all the other countries are so required.
- (C) each country might have a well-founded excuse, based on the provision, for its own lack of compliance
- (D) the treaty specified that the signal for one of the countries to initiate action was notification by the other countries that they had completed action
- (E) there was ambiguity with respect to the date after which all actions contemplated in the treaty are to be complete.

### CRITICAL REASONING TEST SECTION 7

#### 30 MINUTES 20 QUESTIONS

1. A milepost on the towpath read “21” on the side facing the hiker as she approached it and “23” on its back. She reasoned that the next milepost forward on the path would indicate that she was halfway between one end of the path and the other. However, the milepost one mile further on read “20” facing her and “24” behind.

Which of the following, if true, would explain the discrepancy described above?

- (A) The numbers on the next milepost had been reversed.
  - (B) The numbers on the mileposts indicate kilometers, not miles.
  - (C) The facing numbers indicate miles to the end of the path, not miles from the beginning.
  - (D) A milepost was missing between the two the hiker encountered.
  - (E) The mileposts had originally been put in place for the use of mountain bikers, not for hikers.
2. Airline: Newly developed collision-avoidance systems, although not fully tested to discover potential malfunctions, must be installed immediately in passenger planes. Their mechanical warnings enable pilots to avoid crashes.  
Pilots: Pilots will not fly in planes with collision-avoidance systems that are not fully tested. Malfunctioning systems could mislead pilots, causing crashes.  
The pilots’ objection is most strengthened if which of the following is true?
- (A) It is always possible for mechanical devices to malfunction.
  - (B) Jet engines, although not fully tested when first put into use, have achieved exemplary performance and safety records.
  - (C) Although collision-avoidance systems will enable pilots to avoid some crashes, the likely malfunctions of the not-fully-tested systems will cause even more crashes.
  - (D) Many airline collisions are caused in part by the exhaustion of overworked pilots.
  - (E) Collision-avoidance systems, at this stage of development, appear to have worked better in

passenger planes than in cargo planes during experimental flights made over a six-month period.

3. Guitar strings often go “dead”—become less responsive and bright in tone—after a few weeks of intense use. A researcher whose son is a classical guitarist hypothesized that dirt and oil, rather than changes in the material properties of the string, were responsible. Which of the following investigations is most likely to yield significant information that would help to evaluate the researcher’s hypothesis?
- (A) Determining if a metal alloy is used to make the strings used by classical guitarists
  - (B) Determining whether classical guitarists make their strings go dead faster than do folk guitarists
  - (C) Determining whether identical lengths of string, of the same gauge, go dead at different rates when strung on various brands of guitars.
  - (D) Determining whether a dead string and a new string produce different qualities of sound
  - (E) Determining whether smearing various substances on new guitar strings causes them to go dead
4. Most consumers do not get much use out of the sports equipment they purchase. For example, seventeen percent of the adults in the United States own jogging shoes, but only forty-five percent of the owners jog more than once a year, and only seventeen percent jog more than once a week. Which of the following, if true, casts most doubt on the claim that most consumers get little use out of the sports equipment they purchase?
- (A) Joggers are most susceptible to sports injuries during the first six months in which they jog.
  - (B) Joggers often exaggerate the frequency with which they jog in surveys designed to elicit such information.
  - (C) Many consumers purchase jogging shoes for use in activities other than jogging.
  - (D) Consumers who take up jogging often purchase an athletic shoe that can be used in other sports.
  - (E) Joggers who jog more than once a week are often active participants in other sports as well.
5. Two decades after the Emerald River Dam was built, none of the eight fish species native to the Emerald River was still reproducing adequately in the river below the dam. Since the dam reduced the annual range of water temperature in the river below the dam from 50 degrees to 6 degrees, scientists have hypothesized that sharply rising water temperatures must be involved in signaling the native species to begin the reproductive cycle.

Which of the following statements, if true, would most strengthen the scientists’ hypothesis?

- (A) The native fish species were still able to reproduce only in side streams of the river below the dam where the annual temperature range remains approximately 50 degrees.
  - (B) Before the dam was built, the Emerald River annually overflowed its banks, creating backwaters that were critical breeding areas for the native species of fish.
  - (C) The lowest recorded temperature of the Emerald River before the dam was built was 34 degrees, whereas the lowest recorded temperature of the river after the dam was built has been 43 degrees.
  - (D) Nonnative species of fish, introduced into the Emerald River after the dam was built, have begun competing with the declining native fish species for food and space.
  - (E) Five of the fish species native to the Emerald River are not native to any other river in North America.
6. It is true that it is against international law to sell plutonium to countries that do not yet have nuclear weapons. But if United States companies do not do so, companies in other countries will. Which of the following is most like the argument above in its logical structure?
- (A) It is true that it is against the police department’s policy to negotiate with kidnappers. But if the police want to prevent loss of life, they must negotiate in some cases.
  - (B) It is true that it is illegal to refuse to register for military service. But there is a long tradition in the United States of conscientious objection to serving in the armed forces.
  - (C) It is true that it is illegal for a government official to participate in a transaction in which there is

- an apparent conflict of interest. But if the facts are examined carefully, it will clearly be seen that there was no actual conflict of interest in the defendant's case.
- (D) It is true that it is against the law to burglarize people's homes. But someone else certainly would have burglarized that house if the defendant had not done so first.
- (E) It is true that company policy forbids supervisors to fire employees without two written warnings. But there have been many supervisors who have disobeyed this policy.
7. In recent years many cabinetmakers have been winning acclaim as artists. But since furniture must be useful, cabinetmakers must exercise their craft with an eye to the practical utility of their product. For this reason, cabinetmaking is not art.  
Which of the following is an assumption that supports drawing the conclusion above from the reason given for that conclusion?
- (A) Some furniture is made to be placed in museums, where it will not be used by anyone.
- (B) Some cabinetmakers are more concerned than others with the practical utility of the products they produce.
- (C) Cabinetmakers should be more concerned with the practical utility of their products than they currently are.
- (D) An object is not an art object if its maker pays attention to the object's practical utility.
- (E) Artists are not concerned with the monetary value of their products.
8. Although custom prosthetic bone replacements produced through a new computer-aided design process will cost more than twice as much as ordinary replacements, custom replacements should still be cost-effective. Not only will surgery and recovery time be reduced, but custom replacements should last longer, thereby reducing the need for further hospital stays.  
Which of the following must be studied in order to evaluate the argument presented above?
- (A) The amount of time a patient spends in surgery *versus* the amount of time spent recovering from surgery
- (B) The amount by which the cost of producing custom replacements has declined with the introduction of the new technique for producing them
- (C) The degree to which the use of custom replacements is likely to reduce the need for repeat surgery when compared with the use of ordinary replacements
- (D) The degree to which custom replacements produced with the new technique are more carefully manufactured than are ordinary replacements
- (E) The amount by which custom replacements produced with the new technique will drop in cost as the production procedures become standardized and applicable on a larger scale
9. Extinction is a process that can depend on a variety of ecological, geographical, and physiological variables. These variables affect different species of organisms in different ways, and should, therefore, yield a random pattern of extinctions. However, the fossil record shows that extinction occurs in a surprisingly definite pattern, with many species vanishing at the same time.  
Which of the following, if true, forms the best basis for at least a partial explanation of the patterned extinctions revealed by the fossil record?
- (A) Major episodes of extinction can result from widespread environmental disturbances that affect numerous different species.
- (B) Certain extinction episodes selectively affect organisms with particular sets of characteristics unique to their species.
- (C) Some species become extinct because of accumulated gradual changes in their local environments.
- (D) In geologically recent times, for which there is no fossil record, human intervention has changed the pattern of extinctions.
- (E) Species that are widely dispersed are the least likely to become extinct.
10. Neither a rising standard of living nor balanced trade, by itself, establishes a country's ability to compete in the international marketplace. Both are required simultaneously since standards of living can rise because of growing trade deficits and trade can be balanced by means of a decline in a country's standard of living.

If the facts stated in the passage above are true, a proper test of a country's ability to be competitive is its ability to

- (A) balance its trade while its standard of living rises
- (B) balance its trade while its standard of living falls
- (C) increase trade deficits while its standard of living rises
- (D) decrease trade deficits while its standard of living falls
- (E) keep its standard of living constant while trade deficits rise.

11. Certain messenger molecules fight damage to the lungs from noxious air by telling the muscle cells encircling the lungs' airways to contract. This partially seals off the lungs. An asthma attack occurs when the messenger molecules are activated unnecessarily, in response to harmless things like pollen or household dust.

Which of the following, if true, points to the most serious flaw of a plan to develop a medication that would prevent asthma attacks by blocking receipt of any messages sent by the messenger molecules referred to above?

- (A) Researchers do not yet know how the body produces the messenger molecules that trigger asthma attacks.
- (B) Researchers do not yet know what makes one person's messenger molecules more easily activated than another's.
- (C) Such a medication would not become available for several years, because of long lead times in both development and manufacture.
- (D) Such a medication would be unable to distinguish between messages triggered by pollen and household dust and messages triggered by noxious air.
- (E) Such a medication would be a preventative only and would be unable to alleviate an asthma attack once it had started.

12. Since the routine use of antibiotics can give rise to resistant bacteria capable of surviving antibiotic environments, the presence of resistant bacteria in people could be due to the human use of prescription antibiotics. Some scientists, however, believe that most resistant bacteria in people derive from human consumption of bacterially infected meat.

Which of the following statements, if true, would most significantly strengthen the hypothesis of the scientists?

- (A) Antibiotics are routinely included in livestock feed so that livestock producers can increase the rate of growth of their animals.
- (B) Most people who develop food poisoning from bacterially infected meat are treated with prescription antibiotics.
- (C) The incidence of resistant bacteria in people has tended to be much higher in urban areas than in rural areas where meat is of comparable quality.
- (D) People who have never taken prescription antibiotics are those least likely to develop resistant bacteria.
- (E) Livestock producers claim that resistant bacteria in animals cannot be transmitted to people through infected meat.

13. The recent decline in the value of the dollar was triggered by a prediction of slower economic growth in the coming year. But that prediction would not have adversely affected the dollar had it not been for the government's huge budget deficit, which must therefore be decreased to prevent future currency declines.

Which of the following, if true, would most seriously weaken the conclusion about how to prevent future currency declines?

- (A) The government has made little attempt to reduce the budget deficit.
- (B) The budget deficit has not caused a slowdown in economic growth.
- (C) The value of the dollar declined several times in the year prior to the recent prediction of slower economic growth.
- (D) Before there was a large budget deficit, predictions of slower economic growth frequently caused declines in the dollar's value.

- (E) When there is a large budget deficit, other events in addition to predictions of slower economic growth sometimes trigger declines in currency value.

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

At a recent conference on environmental threats to the North Sea, most participating countries favored uniform controls on the quality of effluents, whether or not specific environmental damage could be attributed to a particular source of effluent. What must, of course, be shown, in order to avoid excessively restrictive controls, is that \_\_\_\_\_.

- (A) any uniform controls that are adopted are likely to be implemented without delay
  - (B) any substance to be made subject to controls can actually cause environmental damage
  - (C) the countries favoring uniform controls are those generating the largest quantities of effluents
  - (D) all of any given pollutant that is to be controlled actually reaches the North Sea at present
  - (E) environmental damage already inflicted on the North Sea is reversible
15. Traditionally, decision-making by managers that is reasoned step-by-step has been considered preferable to intuitive decision-making. However, a recent study found that top managers used intuition significantly more than did most middle-or lower-level managers. This confirms the alternative view that intuition is actually more effective than careful, methodical reasoning. The conclusion above is based on which of the following assumptions?
- (A) Methodical, step-by-step reasoning is inappropriate for making many real-life management decisions.
  - (B) Top managers have the ability to use either intuitive reasoning or methodical, step-by-step reasoning in making decisions.
  - (C) The decisions made by middle-and lower-level managers can be made as easily by using methodical reasoning as by using intuitive reasoning.
  - (D) Top managers use intuitive reasoning in making the majority of their decisions.
  - (E) Top managers are more effective at decision-making than middle-or lower-level managers
16. The imposition of quotas limiting imported steel will not help the big American steel mills. In fact, the quotas will help “mini-mills” flourish in the United States. Those small domestic mills will take more business from the big American steel mills than would have been taken by the foreign steel mills in the absence of quotas.

Which of the following, if true, would cast the most serious doubt on the claim made in the last sentence above?

- (A) Quality rather than price is a major factor in determining the type of steel to be used for a particular application.
  - (B) Foreign steel mills have long produced grades of steel comparable in quality to the steel produced by the big American mills.
  - (C) American quotas on imported goods have often induced other countries to impose similar quotas on American goods.
  - (D) Domestic “mini-mills” consistently produce better grades of steel than do the big American mills.
  - (E) Domestic “mini-mills” produce low-volume, specialized types of steels that are not produced by the big American steel mills.
17. Correctly measuring the productivity of service workers is complex. Consider, for example, postal workers: they are often said to be more productive if more letters are delivered per postal worker. But is this really true? what if more letters are lost or delayed per worker at the same time that more are delivered?
- The objection implied above to the productivity measure described is based on doubts about the truth of which of the following statements?
- (A) Postal workers are representative of service workers in general.
  - (B) The delivery of letters is the primary activity of the postal service.
  - (C) Productivity should be ascribed to categories of workers, not to individuals.

- (D) The quality of services rendered can appropriately be ignored in computing productivity.  
 (E) The number of letters delivered is relevant to measuring the productivity of postal workers.
18. Male bowerbirds construct elaborately decorated nests, or bowers. Basing their judgment on the fact that different local populations of bowerbirds of the same species build bowers that exhibit different building and decorative styles, researchers have concluded that the bowerbirds' building styles are a culturally acquired, rather than a genetically transmitted, trait. Which of the following, if true, would most strengthen the conclusion drawn by the researchers?
- (A) There are more common characteristics than there are differences among the bower-building styles of the local bowerbird population that has been studied most extensively  
 (B) Young male bowerbirds are inept at bower-building and apparently spend years watching their elders before becoming accomplished in the local bower style.  
 (C) The bowers of one species of bowerbird lack the towers and ornamentation characteristic of the bowers of most other species of bowerbird.  
 (D) Bowerbirds are found only in New Guinea and Australia, where local populations of the birds apparently seldom have contact with one another.  
 (E) It is well known that the song dialects of some songbirds are learned rather than transmitted genetically.
19. 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.
20. One analyst predicts that Hong Kong can retain its capitalist ways after it becomes part of mainland China in 1997 as long as a capitalist Hong Kong is useful to China; that a capitalist Hong Kong will be useful to China as long as Hong Kong is prosperous; and that Hong Kong will remain prosperous as long as it retains its capitalist ways. If the predictions above are correct, which of the following further predictions can logically be derived from them?
- (A) If Hong Kong fails to stay prosperous, it will no longer remain part of mainland China.  
 (B) If Hong Kong retains its capitalist ways until 1997, it will be allowed to do so afterward.  
 (C) If there is a world economic crisis after 1997, it will not adversely affect the economy of Hong Kong.  
 (D) Hong Kong will be prosperous after 1997  
 (E) The citizens of Hong Kong will have no restrictions placed on them by the government of mainland China.

### CRITICAL REASONING TEST SECTION 8

30 MINUTES 20 QUESTIONS

1. A drug that is highly effective in treating many types of infection can, at present, be obtained only from the bark of the ibora, a tree that is quite rare in the wild. It takes the bark of 5,000 trees to make one kilogram of the drug. It follows, therefore, that continued production of the drug must inevitably lead to the ibora's extinction.

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

- (A) The drug made from ibora bark is dispensed to doctors from a central authority.

- (B) The drug made from ibora bark is expensive to produce.
  - (C) The leaves of the ibora are used in a number of medical products.
  - (D) The ibora can be propagated from cuttings and grown under cultivation.
  - (E) The ibora generally grows in largely inaccessible places.
2. High levels of fertilizer and pesticides, needed when farmers try to produce high yield of the same crop year after year, pollute water supplies. Experts therefore urge farmers to diversify their crops and to rotate their plantings yearly.

To receive governmental price-support benefits for a crop, farmers must have produced that same crop for the past several years.

The statements above, if true, best support which of the following conclusions?

- (A) The rules for governmental support of farm prices work against efforts to reduce water pollution.
  - (B) The only solution to the problem of water pollution from fertilizers and pesticides is to take farmland out of production.
  - (C) Farmers can continue to make a profit by rotating diverse crops, thus reducing costs for chemicals, but not by planting the same crop each year.
  - (D) New farming techniques will be developed to make it possible for farmers to reduce the application of fertilizers and pesticides.
  - (E) Governmental price supports for farm products are set at levels that are not high enough to allow farmers to get out of debt.
3. Shelby Industries manufactures and sells the same gauges as Jones Industries. Employee wages account for forty percent of the cost of manufacturing gauges at both Shelby Industries and Jones Industries. Shelby Industries is seeking a competitive advantage over Jones Industries. Therefore, to promote this end, Shelby Industries should lower employee wages.

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

- (A) Because they make a small number of precision instruments, gauge manufacturers cannot receive volume discounts on raw materials.
  - (B) Lowering wages would reduce the quality of employee work, and this reduced quality would lead to lowered sales.
  - (C) Jones Industries has taken away twenty percent of Shelby Industries' business over the last year.
  - (D) Shelby Industries pays its employees, on average, ten percent more than does Jones Industries.
  - (E) Many people who work for manufacturing plants live in areas in which the manufacturing plant they work for is the only industry.
4. Some communities in Florida are populated almost exclusively by retired people and contain few, if any, families with small children. Yet these communities are home to thriving businesses specializing in the rental of furniture for infants and small children.

Which of the following, if true, best reconciles the seeming discrepancy described above?

- (A) The businesses specializing in the rental of children's furniture buy their furniture from distributors outside of Florida.
- (B) The few children who do reside in these communities all know each other and often make overnight visits to one another's houses.
- (C) Many residents of these communities who move frequently prefer renting their furniture to buying it outright.
- (D) Many residents of these communities must provide for the needs of visiting grandchildren several weeks a year.
- (E) Children's furniture available for rental is of the same quality as that available for sale in the stores.



5. Large national budget deficits do not cause large trade deficits. If they did, countries with the largest budget deficits would also have the largest trade deficits. In fact, when deficit figures are adjusted so that different countries are reliably comparable to each other, there is no such correlation.

If the statements above are all true, which of the following can properly be inferred on the basis of them?

- (A) Countries with large national budget deficits tend to restrict foreign trade.
  - (B) Reliable comparisons of the deficit figures of one country with those of another are impossible.
  - (C) Reducing a country's national budget deficit will not necessarily result in a lowering of any trade deficit that country may have.
  - (D) When countries are ordered from largest to smallest in terms of population, the smallest countries generally have the smallest budget and trade deficits.
  - (E) Countries with the largest trade deficits never have similarly large national budget deficits.
6. "Fast cycle time" is a strategy of designing a manufacturing organization to eliminate bottlenecks and delays in production. Not only does it speed up production, but it also assures quality. The reason is that the bottlenecks and delays cannot be eliminated unless all work is done right the first time.

The claim about quality made above rests on a questionable presupposition that

- (A) any flaw in work on a product would cause a bottleneck or delay and so would be prevented from occurring on a "fast cycle" production line
  - (B) the strategy of "fast cycle time" would require fundamental rethinking of product design
  - (C) the primary goal of the organization is to produce a product of unexcelled quality, rather than to generate profits for stockholders
  - (D) "fast cycle time" could be achieved by shaving time off each of the component processes in production cycle
  - (E) "fast cycle time" is a concept in business strategy that has not yet been put into practice in a factory
7. Many breakfast cereals are fortified with vitamin supplements. Some of these cereals provide 100 percent of the recommended daily requirement of vitamins. Nevertheless, a well-balanced breakfast, including a variety of foods, is a better source of those vitamins than are such fortified breakfast cereals alone.

Which of the following, if true, would most strongly support the position above?

- (A) In many foods, the natural combination of vitamins with other nutrients makes those vitamins more usable by the body than are vitamins added in vitamin supplements.
  - (B) People who regularly eat cereals fortified with vitamin supplements sometimes neglect to eat the foods in which the vitamins occur naturally.
  - (C) Foods often must be fortified with vitamin supplements because naturally occurring vitamins are removed during processing.
  - (D) Unprocessed cereals are naturally high in several of the vitamins that are usually added to fortified breakfast cereals.
  - (E) Cereals containing vitamin supplements are no harder to digest than similar cereals without added vitamins.
8. Which of the following best completes the passage below?
- The more worried investors are about losing their money, the more they will demand a high potential return on their investment; great risks must be offset by the chance of great rewards. This principle is the fundamental one in determining interest rates, and it is illustrated by the fact that——.

- (A) successful investors are distinguished by an ability to make very risky investments without worrying about their money

- (B) lenders receive higher interest rates on unsecured loans than on loans backed by collateral
- (C) in times of high inflation, the interest paid to depositors by banks can actually be below the rate of inflation
- (D) at any one time, a commercial bank will have a single rate of interest that it will expect all of its individual borrowers to pay
- (E) the potential return on investment in a new company is typically lower than the potential return on investment in a well-established company
9. A famous singer recently won a lawsuit against an advertising firm for using another singer in a commercial to evoke the famous singer's well-known rendition of a certain song. As a result of the lawsuit, advertising firms will stop using imitators in commercials. Therefore, advertising costs will rise, since famous singers' services cost more than those of their imitators. The conclusion above is based on which of the following assumptions?
- (A) Most people are unable to distinguish a famous singer's rendition of a song from a good imitator's rendition of the same song.
- (B) Commercials using famous singers are usually more effective than commercials using imitators of famous singers.
- (C) The original versions of some well-known songs are unavailable for use in commercials.
- (D) Advertising firms will continue to use imitators to mimic the physical mannerisms of famous singers.
- (E) The advertising industry will use well-known renditions of songs in commercials.
10. A certain mayor has proposed a fee of five dollars per day on private vehicles entering the city, claiming that the fee will alleviate the city's traffic congestion. The mayor reasons that, since the fee will exceed the cost of round-trip bus fare from many nearby points, many people will switch from using their cars to using the bus.
- Which of the following statements, if true, provides the best evidence that the mayor's reasoning is flawed?
- (A) Projected increases in the price of gasoline will increase the cost of taking a private vehicle into the city.
- (B) The cost of parking fees already makes it considerably more expensive for most people to take a private vehicle into the city than to take a bus.
- (C) Most of the people currently riding the bus do not own private vehicles.
- (D) Many commuters opposing the mayor's plan have indicated that they would rather endure traffic congestion than pay a five-dollar-per day fee.
- (E) During the average workday, private vehicles owned and operated by people living within the city account for twenty percent of the city's traffic congestion.
11. 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.

12. When hypnotized subjects are told that they are deaf and are then asked whether they can hear the hypnotist, they reply, "No." Some theorists try to explain this result by arguing that the selves of hypnotized subjects are dissociated into separate parts, and that the part that is deaf is dissociated from the part that replies.

Which of the following challenges indicates the most serious weakness in the attempted explanation described above?

- (A) Why does the part that replies not answer, "Yes"?
- (B) Why are the observed facts in need of any special explanation?
- (C) Why do the subjects appear to accept the hypnotist's suggestion that they are deaf?
- (D) Why do hypnotized subjects all respond the same way in the situation described?
- (E) Why are the separate parts of the self the same for all subjects?

Questions 13-14 are based on the following.

The program to control the entry of illegal drugs into the country was a failure in 1987. If the program had been successful, the wholesale price of most illegal drugs would not have dropped substantially in 1987.

13. The argument in the passage depends on which of the following assumptions?

- (A) The supply of illegal drugs dropped substantially in 1987.
- (B) The price paid for most illegal drugs by the average consumer did not drop substantially in 1987.
- (C) Domestic production of illegal drugs increased at a higher rate than did the entry of such drugs into the country.
- (D) The wholesale price of a few illegal drugs increased substantially in 1987.
- (E) A drop in demand for most illegal drugs in 1987 was not the sole cause of the drop in their wholesale price.

14. The argument in the passage would be most seriously weakened if it were true that

- (A) in 1987 smugglers of illegal drugs, as a group, had significantly more funds at their disposal than did the country's customs agents
- (B) domestic production of illegal drugs increased substantially in 1987
- (C) the author's statements were made in order to embarrass the officials responsible for the drug-control program
- (D) in 1987 illegal drugs entered the country by a different set of routes than they did in 1986
- (E) the country's citizens spent substantially more money on illegal drugs in 1987 than they did in 1986.

15. Excavation of the ancient city of Kourion on the island of Cyprus revealed a pattern of debris and collapsed buildings typical of towns devastated by earthquakes. Archaeologists have hypothesized that the destruction was due to a major earthquake known to have occurred near the island in A.D.365.

Which of the following, if true, most strongly supports the archaeologists' hypothesis?

- (A) Bronze ceremonial drinking vessels that are often found in graves dating from years preceding and following A.D.365 were also found in several graves near Kourion.
- (B) No coins minted after A.D.365 were found in Kourion, but coins minted before that year were found in abundance.
- (C) Most modern histories of Cyprus mention that an earthquake occurred near the island in A.D.365.
- (D) Several small statues carved in styles current in Cyprus in the century between A.D.300 and 400 were found in Kourion.
- (E) Stone inscriptions in a form of the Greek alphabet that was definitely used in Cyprus after A.D.365 were found in Kourion.

16. Sales of telephones have increased dramatically over the last year. In order to take advantage

of this increase, Mammoth Industries plans to expand production of its own model of telephone, while continuing its already very extensive advertising of this product.

Which of the following, if true, provides most support for the view that Mammoth Industries cannot increase its sales of telephones by adopting the plan outlined above?

- (A) Although it sells all of the telephones that it produces, Mammoth Industries' share of all telephone sales has declined over the last year.
  - (B) Mammoth Industries' average inventory of telephones awaiting shipment to retailers has declined slightly over the last year.
  - (C) Advertising has made the brand name of Mammoth Industries' telephones widely known, but few consumers know that Mammoth Industries owns this brand.
  - (D) Mammoth Industries' telephone is one of three brands of telephone that have together accounted for the bulk of the last year's increase in sales.
  - (E) Despite a slight decline in the retail price, sales of Mammoth Industries' telephones have fallen in the last year.
17. Many institutions of higher education suffer declining enrollments during periods of economic slowdown. At two-year community colleges, however, enrollment figures boom during these periods when many people have less money and there is more competition for jobs.

Each of the following, if true, helps to explain the enrollment increases in two-year community colleges described above EXCEPT:

- (A) During periods of economic slowdown, two-year community colleges are more likely than four-year colleges to prepare their students for the jobs that are still available.
- (B) During periods of economic prosperity, graduates of two-year community colleges often continue their studies at four-year colleges.
- (C) Tuition at most two-year community colleges is a fraction of that at four-year colleges.
- (D) Two-year community colleges devote more resources than do other colleges to attracting those students especially affected by economic slowdowns.
- (E) Students at two-year community colleges, but not those at most four-year colleges, can control the cost of their studies by choosing the number of courses they take each term.

Question 18-19 are based on the following.

Hardin argued that grazing land held in common (that is, open to any user) would always be used less carefully than private grazing land. Each rancher would be tempted to overuse common land because the benefits would accrue to the individual, while the costs of reduced land quality that results from overuse would be spread among all users. But a study comparing 217 million acres of common grazing land with 433 million acres of private grazing land showed that the common land was in better condition.

18. The answer to which of the following questions would be most useful in evaluating the significance, in relation to Hardin's claim, of the study described above?
- (A) Did any of the ranchers whose land was studied use both common and private land?
  - (B) Did the ranchers whose land was studied tend to prefer using common land over using private land for grazing?
  - (C) Was the private land that was studied of comparable quality to the common land before either was used for grazing?
  - (D) Were the users of the common land that was studied at least as prosperous as the users of the private land?
  - (E) Were there any owners of herds who used only common land, and no private land, for grazing?
19. Which of the following, if true and known by the ranchers, would best help explain the results of the study?
- (A) With private grazing land, both the costs and the benefits of overuse fall to the individual user.
  - (B) The cost in reduced land quality that is attributable to any individual user is less easily measured with common land than it is with private land.

- (C) An individual who overuses common grazing land might be able to achieve higher returns than other users can, with the result that he or she would obtain a competitive advantage.  
 (D) If one user of common land overuses it even slightly, the other users are likely to do so even more, with the consequence that the costs to each user outweigh the benefits.  
 (E) There are more acres of grazing land held privately than there are held in common.
20. In tests for pironoma, a serious disease, a false positive result indicates that people have pironoma when, in fact, they do not; a false negative result indicates that people do not have pironoma when, in fact, they do. To detect pironoma most accurately, physicians should use the laboratory test that has the lowest proportion of false positive results.

Which of the following, if true, gives the most support to the recommendation above?

- (A) The accepted treatment for pironoma does not have damaging side effects.  
 (B) The laboratory test that has the lowest proportion of false positive results causes the same minor side effects as do the other laboratory tests used to detect pironoma.  
 (C) In treating pironoma patients, it is essential to begin treatment as early as possible, since even a week of delay can result in loss of life.  
 (D) The proportion of inconclusive test results is equal for all laboratory tests used to detect pironoma.  
 (E) All laboratory tests to detect pironoma have the same proportion of false negative results.

### CRITICAL REASONING TEST SECTION 9

**30 MINUTES 20 QUESTIONS**

Questions 1-2 are based on the following.

Companies O and P each have the same number of employees who work the same number of hours per week. According to records maintained by each company, the employees of Company O had fewer job-related accidents last year than did the employees of Company P. Therefore, employees of Company O are less likely to have job-related accidents than are employees of Company P.

1. Which of the following, if true, would most strengthen the conclusion above?
- (A) Company P manufactures products that are more hazardous for workers to produce than does Company O.  
 (B) Company P holds more safety inspections than does Company O.  
 (C) Company P maintains a more modern infirmary than does Company O.  
 (D) Company O paid more for new job-related medical claims than did Company P.  
 (E) Company P provides more types of health-care benefits than does Company O.
2. Which of the following, if true, would most weaken the conclusion above?
- (A) The employees of Company P lost more time at work due to job-related accidents than did the employees of Company O.  
 (B) Company P considered more types of accidents to be job-related than did Company O.  
 (C) The employees of Company P were sick more often than were the employees of Company O.  
 (D) Several employees of Company O each had more than one job-related accident.  
 (E) The majority of job-related accidents at Company O involved a single machine.
3. In comparison to the standard typewriter keyboard, the EFCO keyboard, which places the most-used keys nearest the typist's strongest fingers, allows faster typing and results in less fatigue. Therefore, replacement of standard keyboards with the EFCO keyboard will result in an immediate reduction of typing costs.

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

- (A) People who use both standard and EFCO keyboards report greater difficulty in the transition from the EFCO keyboard to the standard keyboard than in the transition from the standard keyboard to the EFCO keyboard.

- (B) EFCO keyboards are no more expensive to manufacture than are standard keyboards and require less frequent repair than do standard keyboards.
- (C) The number of businesses and government agencies that use EFCO keyboards is increasing each year.
- (D) The more training and experience an employee has had with the standard keyboard, the more costly it is to train that employee to use the EFCO keyboard.
- (E) Novice typists can learn to use the EFCO keyboard in about the same amount of time it takes them to learn to use the standard keyboard.

Questions 4-5 are based on the following.

Half of the subjects in an experiment—the experimental group—consumed large quantities of a popular artificial sweetener. Afterward, this group showed lower cognitive abilities than did the other half of the subjects—the control group—who did not consume the sweetener. The detrimental effects were attributed to an amino acid that is one of the sweetener's principal constituents.

4. Which of the following, if true, would best support the conclusion that some ingredient of the sweetener was responsible for the experimental results?
- (A) Most consumers of the sweetener do not consume as much of it as the experimental group members did.
  - (B) The amino acid referred to in the conclusion is a component of all proteins, some of which must be consumed for adequate nutrition.
  - (C) The quantity of the sweetener consumed by individuals in the experimental group is considered safe by federal food regulators.
  - (D) The two groups of subjects were evenly matched with regard to cognitive abilities prior to the experiment.
  - (E) A second experiment in which subjects consumed large quantities of the sweetener lacked a control group of subjects who were not given the sweetener.
5. Which of the following, if true, would best help explain how the sweetener might produce the observed effect?
- (A) The government's analysis of the artificial sweetener determined that it was sold in relatively pure form.
  - (B) A high level of the amino acid in the blood inhibits the synthesis of a substance required for normal brain functioning.
  - (C) Because the sweetener is used primarily as a food additive, adverse reactions to it are rarely noticed by consumers.
  - (D) The amino acid that is a constituent of the sweetener is also sold separately as a dietary supplement.
  - (E) Subjects in the experiment did not know whether they were consuming the sweetener or a second, harmless substance.
6. Adult female rats who have never before encountered rat pups will start to show maternal behaviors after being confined with a pup for about seven days. This period can be considerably shortened by disabling the female's sense of smell or by removing the scent-producing glands of the pup.
- Which of the following hypotheses best explains the contrast described above?
- (A) The sense of smell in adult female rats is more acute than that in rat pups.
  - (B) The amount of scent produced by rat pups increases when they are in the presence of a female rat that did not bear them.
  - (C) Female rats that have given birth are more affected by olfactory cues than are female rats that have never given birth.
  - (D) A female rat that has given birth shows maternal behavior toward rat pups that she did not bear more quickly than does a female rat that has never given birth.
  - (E) The development of a female rat's maternal interest in a rat pup that she did not bear is inhibited by the odor of the pup.

7. The interview is an essential part of a successful hiring program because, with it, job applicants

who have personalities that are unsuited to the requirements of the job will be eliminated from consideration.

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

- (A) A hiring program will be successful if it includes interviews.
- (B) The interview is a more important part of a successful hiring program than is the development of a job description.
- (C) Interviewers can accurately identify applicants whose personalities are unsuited to the requirements of the job.
- (D) The only purpose of an interview is to evaluate whether job applicants' personalities are suited to the requirements of the job.
- (E) the fit of job applicants' personalities to the requirements of the job was once the most important factor in making hiring decisions.

8. An overly centralized economy, not the changes in the climate, is responsible for the poor agricultural production in Country X since its new government came to power. Neighboring Country Y has experienced the same climatic conditions, but while agricultural production has been falling in Country X, it has been rising in Country Y.

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

- (A) Industrial production also is declining in Country X.
- (B) Whereas Country Y is landlocked, Country X has a major seaport.
- (C) Both Country X and Country Y have been experiencing drought conditions.
- (D) The crops that have always been grown in Country X are different from those that have always been grown in Country Y.
- (E) Country X's new government instituted a centralized economy with the intention of ensuring an equitable distribution of goods.

9. Useful protein drugs, such as insulin, must still be administered by the cumbersome procedure of injection under the skin. If proteins are taken orally, they are digested and cannot reach their target cells. Certain nonprotein drugs, however, contain chemical bonds that are not broken down by the digestive system. They can, thus, be taken orally.

The statements above most strongly support a claim that a research procedure that successfully accomplishes which of the following would be beneficial to users of protein drugs?

- (A) Coating insulin with compounds that are broken down by target cells, but whose chemical bonds are resistant to digestion
- (B) Converting into protein compounds, by procedures that work in the laboratory, the nonprotein drugs that resist digestion
- (C) Removing permanently from the digestive system any substances that digest proteins
- (D) Determining, in a systematic way, what enzymes and bacteria are present in the normal digestive system and whether they tend to be broken down within the body
- (E) Determining the amount of time each nonprotein drug takes to reach its target cells.

10. Country Y uses its scarce foreign-exchange reserves to buy scrap iron for recycling into steel. Although the steel thus produced earns more foreign exchange than it costs, that policy is foolish. Country Y's own territory has vast deposits of iron ore, which can be mined with minimal expenditure of foreign exchange.

Which of the following, if true, provides the strongest support for Country Y's policy of buying scrap iron abroad?

- (A) The price of scrap iron on international markets rose significantly in 1987.
- (B) Country Y's foreign-exchange reserves dropped significantly in 1987.
- (C) There is virtually no difference in quality between steel produced from scrap iron and that produced from iron ore.
- (D) Scrap iron is now used in the production of roughly half the steel used in the world today, and experts predict that scrap iron will be used even more extensively in the future.

- (E) Furnaces that process scrap iron can be built and operated in Country Y with substantially less foreign exchange than can furnaces that process iron ore.
11. Last year the rate of inflation was 1.2 percent, but for the current year it has been 4 percent. We can conclude that inflation is on an upward trend and the rate will be still higher next year.
- Which of the following, if true, most seriously weakens the conclusion above?
- (A) The inflation figures were computed on the basis of a representative sample of economic data rather than all of the available data.
- (B) Last year a dip in oil prices brought inflation temporarily below its recent stable annual level of 4 percent.
- (C) Increases in the pay of some workers are tied to the level of inflation, and at an inflation rate of 4 percent or above, these pay raises constitute a force causing further inflation.
- (D) The 1.2 percent rate of inflation last year represented a ten-year low.
- (E) Government intervention cannot affect the rate of inflation to any significant degree.
12. Because no employee wants to be associated with bad news in the eyes of a superior, information about serious problems at lower levels is progressively softened and distorted as it goes up each step in the management hierarchy. The chief executive is, therefore, less well informed about problems at lower levels than are his or her subordinates at those levels.

The conclusion drawn above is based on the assumption that

- (A) problems should be solved at the level in the management hierarchy at which they occur
- (B) employees should be rewarded for accurately reporting problems to their superiors
- (C) problem-solving ability is more important at higher levels than it is at lower levels of the management hierarchy
- (D) chief executives obtain information about problems at lower levels from no source other than their subordinates
- (E) some employees are more concerned about truth than about the way they are perceived by their superiors
13. In the United States in 1986, the average rate of violent crime in states with strict gun-control laws was 645 crimes per 100,000 persons—about 50 percent higher than the average rate in the eleven states where strict gun-control laws have never been passed. Thus one way to reduce violent crime is to repeal strict gun control laws.
- Which of the following, if true, would most weaken the argument above?
- (A) The annual rate of violent crime in states with strict gun-control laws has decreased since the passage of those laws.
- (B) In states with strict gun-control laws, few individuals are prosecuted for violating such laws.
- (C) In states without strict gun-control laws, many individuals have had no formal training in the use of firearms.
- (D) The annual rate of nonviolent crime is lower in states with strict gun-control laws than in states without such laws.
- (E) Less than half of the individuals who reside in states without strict gun-control laws own a gun.
14. Corporate officers and directors commonly buy and sell, for their own portfolios, stock in their own corporations. Generally, when the ratio of such inside sales to inside purchases falls below 2 to 1 for a given stock, a rise in stock prices is imminent. In recent days, while the price of MEGA Corporation stock has been falling, the corporation's officers and directors have bought up to nine times as much of it as they have sold.

The facts above best support which of the following predictions?

- (A) The imbalance between inside purchases and inside sales of MEGA stock will grow even further.



- (B) Inside purchases of MEGA stock are about to cease abruptly.  
(C) The price of MEGA stock will soon begin to go up.  
(D) The price of MEGA stock will continue to drop, but less rapidly.  
(E) The majority of MEGA stock will soon be owned by MEGA's own officers and directors.
15. The proposal to hire ten new police officers in Middletown is quite foolish. There is sufficient funding to pay the salaries of the new officers, but not the salaries of additional court and prison employees to process the increased caseload of arrests and convictions that new officers usually generate.
- Which of the following, if true, will most seriously weaken the conclusion drawn above?
- (A) Studies have shown that an increase in a city's police force does not necessarily reduce crime.  
(B) When one major city increased its police force by 19 percent last year, there were 40 percent more arrests and 13 percent more convictions.  
(C) If funding for the new police officers' salaries is approved, support for other city services will have to be reduced during the next fiscal year.  
(D) In most United States cities, not all arrests result in convictions, and not all convictions result in prison terms.  
(E) Middletown's ratio of police officers to citizens has reached a level at which an increase in the number of officers will have a deterrent effect on crime.
16. A recent report determined that although only three percent of drivers on Maryland highways equipped their vehicles with radar detectors, thirty-three percent of all vehicles ticketed for exceeding the speed limit were equipped with them. Clearly, drivers who equip their vehicles with radar detectors are more likely to exceed the speed limit regularly than are drivers who do not.
- The conclusion drawn above depends on which of the following assumptions?
- (A) Drivers who equip their vehicles with radar detectors are less likely to be ticketed for exceeding the speed limit than are drivers who do not.  
(B) Drivers who are ticketed for exceeding the speed limit are more likely to exceed the speed limit regularly than are drivers who are not ticketed.  
(C) The number of vehicles that were ticketed for exceeding the speed limit was greater than the number of vehicles that were equipped with radar detectors.  
(D) Many of the vehicles that were ticketed for exceeding the speed limit were ticketed more than once in the time period covered by the report.  
(E) Drivers on Maryland highways exceeded the speed limit more often than did drivers on other state highways not covered in the report.
17. There is a great deal of geographical variation in the frequency of many surgical procedures—up to tenfold variation per hundred thousand between 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 every 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 procedure (other than hysterectomies, prostatectomies, and tonsillectomies) 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.
18. 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.

19. In 1987 sinusitis was the most common chronic medical condition in the United States, followed by arthritis and high blood pressure, in that order.

The incidence rates for both arthritis and high blood pressure increase with age, but the incidence rate for sinusitis is the same for people of all ages.

The average age of the United States population will increase between 1987 and 2000.

Which of the following conclusions can be most properly drawn about chronic medical conditions in the United States from the information given above?

- (A) Sinusitis will be more common than either arthritis or high blood pressure in 2000.
  - (B) Arthritis will be the most common chronic medical condition in 2000.
  - (C) The average age of people suffering from sinusitis will increase between 1987 and 2000.
  - (D) Fewer people will suffer from sinusitis in 2000 than suffered from it in 1987.
  - (E) A majority of the population will suffer from at least one of the medical conditions mentioned above by the year 2000.
20. Parasitic wasps lay their eggs directly into the eggs of various host insects in exactly the right numbers for any suitable size of host egg. If they laid too many eggs in a host egg, the developing wasp larvae would compete with each other to the death for nutrients and space. If too few eggs were laid, portions of the host egg would decay, killing the wasp larvae.
- Which of the following conclusions can properly be drawn from the information above?
- (A) The size of the smallest host egg that a wasp could theoretically parasitize can be determined from the wasp's egg-laying behavior.
  - (B) Host insects lack any effective defenses against the form of predation practiced by parasitic wasps.
  - (C) Parasitic wasps learn from experience how many eggs to lay into the eggs of different host species.
  - (D) Failure to lay enough eggs would lead to the death of the developing wasp larvae more quickly than would laying too many eggs.
  - (E) Parasitic wasps use visual clues to calculate the size of a host egg.

## CRITICAL REASONING TEST SECTION 10

30 Minutes 20 Questions

1. In 1985 in the country of Alissia, farmers brought to market a broccoli crop that was one-and-a-half times as large as the 1985 broccoli crop in its neighbor country, Barbera. Yet total quantities of broccoli available for sale to consumers in Alissia were smaller than were total quantities in Barbera in 1985.

Which of the following, if true in 1985, contributes most to an explanation of why there was less broccoli available for sale to consumers in Alissia than in Barbera?

- A. Barbera's farmers produced much more cabbage than did Alissia's farmers.
- B. Barbera's farmers produced fewer heads of broccoli per acre than did Alissia's farmers.

- C. Alissia exported a much higher proportion of its broccoli crop than did Barbera.
- D. Broccoli was much more popular among consumers in Alissia than in Barbera.
- E. Alissia had more land suitable for growing broccoli than did Barbera.

2. A manufacturer of men's dress socks sought to increase profits by increasing sales. The size of its customer pool was remaining steady, with the average customer buying twelve pairs of dress socks per year. The company's plan was to increase the number of promotional discount-sale periods to one every six months.

Which of the following, if it is a realistic possibility, casts the most serious doubt on the viability of the company's plan?

- A. New manufacturing capacity would not be required if the company were to increase the number of pairs of socks sold.
- B. Inventory stocks of merchandise ready for sale would be high preceding the increase in the number of discount-sale periods.
- C. The manufacturer's competitors would match its discounts during sale periods, and its customers would learn to wait for those times to make their purchases.
- D. New styles and colors would increase customers' consciousness of fashion in dress socks, but the customers' requirements for older styles and colors would not be reduced.
- E. The cost of the manufacturer's raw materials would remain steady, and its customers would have more disposable income.

3. Previous studies have indicated that eating chocolate increases the likelihood of getting heart disease. However, a new, more reliable study has indicated that eating chocolate does not increase the likelihood of getting heart disease. When the results of the new study become known, consumption of chocolate will undoubtedly increase.

Which of the following is an assumption on which the conclusion above is based?

- A. Most people who eat a great deal of chocolate will not get heart disease.
- B. Although they believe that eating chocolate increases the likelihood of getting heart disease, some people still eat as much chocolate as they want.
- C. People who have heard that eating chocolate increases the likelihood of getting heart disease do not believe it.
- D. There are people who currently eat as much chocolate as they want because they have not heard that eating chocolate increases the likelihood of getting heart disease.
- E. There are people who currently limit their consumption of chocolate only because they believe that eating chocolate increases the likelihood of getting heart disease.

4. The fossil record shows that the climate of North America warmed and dried at the end of the Pleistocene period. Most of the species of large mammals then living on the continent became extinct, but the smaller mammalian species survived.

Which of the following, if true, provides the best basis for an explanation of the contrast described above between species of large mammals and species of small mammals?

- A. Individual large mammals can, in general, travel further than small mammals and so are more able to migrate in search of a hospitable environment.
- B. The same pattern of comparative success in smaller, as opposed to larger, species that is observed in mammals is also found in bird species of the same period.
- C. The fossil record from the end of Pleistocene period is as clear for small mammals as it is for large mammals.
- D. Larger mammals have greater food and space requirements than smaller mammals and are thus less able to withstand environmental change.
- E. Many more of the species of larger mammals than of the species of smaller mammals living in North America in that period had originated in climates that were warmer than was that of North America before the end of the Pleistocene period.

5. Bonuses at DSR Industries cannot be awarded unless profits exceed a ten percent return on stockholders' investments in the company. Higher profits mean higher bonuses. Therefore, bonuses in a year of general economic recession will be considerably lower than bonuses in a year of peak profits at DSR.

The conclusion above depends on the assumption that

- A. the firm will have relatively low profits in recession years
- B. the amount represented by a ten percent return on stockholders' investments in the company will increase from year to year
- C. profits rarely exceed a ten percent return on stockholders' investments in the company
- D. profits in excess of a ten percent return on stockholders' investments in the company are all distributed in the form of bonuses
- E. bonuses at DSR never drop to zero

Questions 6-7 are based on the following.

Suitable habitats for gray wolves have greatly diminished in area. In spite of this fact, the most sensible course would be to refrain from reestablishing gray wolves in places where previously they have been hunted out of existence. Striving to bring back these animals to places where they will only face lethal human hostility is immoral.

6. The argument above depends on

- A. an appeal to an authority
- B. a belief that gray wolves are dangerous to human beings and livestock
- C. an assumption that two events that occur together must be causally connected
- D. an assumption that the future will be like the past
- E. a threat of violence against those persons presenting the opposing view

7. The argument above would be most significantly weakened if which of the following were true?

- (A) Effective laws against the hunting of gray wolves have been enacted.
- (B) Ranchers, farmers, and hunters still have an ingrained bias against gray wolves.
- (C) By the 1930's bounty hunters had exterminated most of the gray wolves in the United States.
- (D) Programs for increasing the gray wolf population are not aided by federal laws that require the licensing of hunters of certain predators.
- (E) Suggested programs for increasing the gray wolf population have been criticized by environmentalists and biologists.

8. For the safety-conscious Swedish market, a United States manufacturer of desktop computers developed a special display screen that produces a much weaker electromagnetic field surrounding the user than do ordinary screens. Despite an advantage in this respect over its competitors, the manufacturer is introducing the screen into the United States market without advertising it as a safety improvement.

Which of the following, if true, provides a rationale for the manufacturer's approach to advertising the screen in the United States?

- (A) Many more desktop computers are sold each year in the United States market than are sold in the Swedish market.
- (B) The manufacturer does not want its competitors to become aware of the means by which the company has achieved this advance in technology.
- (C) Most business and scientific purchasers of desktop computers expect to replace such equipment eventually as better technology becomes available on the market.
- (D) An emphasis on the comparative safety of the new screen would call into question the safety of the many screens the manufacturer has already sold in the United States.
- (E) Concern has been expressed in the United States over the health effects of the large

electromagnetic fields surrounding electric power lines.

9. In the suburbs surrounding Middletown, there is an average of 2.4 automobiles per family, and thus very few suburban residents use public buses. The suburban communities, therefore, would derive little benefit from continuing to subsidize the portion of Middletown's public bus system that serves the suburbs.

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

- (A) The real-estate tax rate in Middletown is higher than it is in the suburbs.
- (B) Last year voters in the suburban communities defeated by a narrow margin a bill designed to increase subsidies for public bus routes.
- (C) Many suburban shops can attract enough employees to remain in business only because subsidized public transportation from Middletown is available.
- (D) Public buses operated with less than a 35 percent occupancy rate produce more pollution per passenger mile than would the operation of private automobiles for each passenger.
- (E) Most voters in Middletown's suburban communities are unwilling to continue subsidies for public buses next year if ridership on those buses drops below current levels.

10. Any tax relief received by the solar industry would not benefit the homeowner who installs a solar-energy system. Even though homeowners would pay a lower price for solar-energy system installations because of this tax relief, with the government paying the balance, government revenues come from the public.

The argument above is based on which of the following assumptions?

- (A) The tax relief would cause the homeowner to lose, through taxes or reduced government benefits or both, an amount at least equal to the reduction in the price of that home-owner's solar-energy system installation.
- (B) The tax relief that would be received by solar-energy industries would not be offered at the same time as any tax relief for other industries.
- (C) Advertisements of the solar-energy industry, by failing to identify the source of government revenues explicitly to the public, mask the advantage the industry receives from the public.
- (D) Homeowners generally believe that they benefit from any tax relief offered to the solar-energy industry.
- (E) Tax relief would encourage solar industries to sell solar-energy systems at higher prices.

11. Less than 50 percent of a certain tropical country's wildlands remains intact. Efforts are under way to restore biological diversity in that country by restoring some destroyed wild habitats and extending some relatively intact portions of forests. However, opponents argue that these efforts are not needed because there is still plenty of wildland left.

Which of the following, if true, most significantly weakens the argument of the opponents of conservation efforts?

- (A) As much, if not more, effort is required to restore a wild habitat as to preserve an intact habitat.
- (B) The opponents of restoration efforts are, for the most part, members of the wealthier classes in their own villages and cities.
- (C) Existing conservation laws have been very effective in preserving biological diversity within the wildlands that remain intact.
- (D) For many tropical species native to that country, the tropical wildlands that are still relatively intact do not provide appropriate habitats for reproduction.
- (E) If a suitable population of plants and animals is introduced and is permitted to disperse and grow, tropical habitats can most certainly be restored.

12. A study comparing a group of chronically depressed individuals with an otherwise matched group of individuals free from depression found significantly more disorders of the immune system among the depressed group. According to the researchers, these results strongly support

the hypothesis that mental states influence the body's vulnerability to infection.

Which of the following, if true, casts the most serious doubt on the researchers' interpretation of their findings?

- (A) The researchers' view does little more than echo a familiar theme in folklore and literature.
- (B) Chronically depressed individuals are no less careful than others to avoid exposure to infections.
- (C) Disorders of the immune system cause many of those individuals who have them to become chronically depressed.
- (D) Individuals who have previously been free from depression can become depressed quite suddenly.
- (E) A high frequency of infections can stem from an unusually high level of exposure rather than from any disorder of the immune system.

13. Exports of United States wood pulp will rise considerably during this year. The reason for the rise is that the falling value of the dollar will make it cheaper for paper manufacturers in Japan and Western Europe to buy American wood pulp than to get it from any other source.

Which of the following is an assumption made in drawing the conclusion above?

- (A) Factory output of paper products in Japan and Western Europe will increase sharply during this year.
- (B) The quality of the wood pulp produced in the United States would be adequate for the purposes of Japanese and Western European paper manufacturers.
- (C) Paper manufacturers in Japan and Western Europe would prefer to use wood pulp produced in the United States if cost were not a factor.
- (D) Demand for paper products made in Japan and Western Europe will not increase sharply during this year.
- (E) Production of wood pulp by United States companies will not increase sharply during this year.

14. A company's personnel director surveyed employees about their satisfaction with the company's system for awarding employee performance ratings. The survey data indicated that employees who received high ratings were very satisfied with the system. The personnel director concluded from these data that the company's best-performing employees liked the system.

The personnel director's conclusion assumes which of the following?

- (A) No other performance rating system is as good as the current system.
- (B) The company's best-performing employees received high ratings.
- (C) Employees who received low ratings were dissatisfied with the system.
- (D) Employees who receive high ratings from a performance-rating system will like that system.
- (E) The company's best-performing employees were motivated to perform well by the knowledge that they would receive performance ratings.

15. In Argonia the average rate drivers pay for car accident insurance is regulated to allow insurance companies to make a reasonable profit. Under the regulations, the rate any individual driver pays never depends on the actual distance driven by that driver each year. Therefore, Argonians who drive less than average partially subsidize the insurance of those who drive more than average.

The conclusion above would be properly drawn if it were also true that in Argonia

- (A) the average accident insurance rate for all drivers rises whenever a substantial number of new drivers buy insurance
- (B) the average cost to insurance companies of insuring drivers who drive less than the annual average is less than the average cost of insuring drivers who drive more than the annual average
- (C) the lower the age of a driver, the higher the insurance rate paid by that driver

- (D) insurance company profits would rise substantially if drivers were classified in terms of the actual number of miles they drive each year
- (E) drivers who have caused insurance companies to pay costly claims generally pay insurance rates that are equal to or lower than those paid by other drivers
16. In the 1970's there was an oversupply of college graduates. The oversupply caused the average annual income of college graduates to fall to a level only 18 percent greater than that of workers with only high school diplomas. By the late 1980's the average annual income of college graduates was 43 percent higher than that of workers with only high school diplomas, even though between the 1970's and the late 1980's the supply of college graduates did not decrease.
- Which of the following, if true in the late 1980's, best reconciles the apparent discrepancy described above?
- (A) The economy slowed, thus creating a decreased demand for college graduates.
- (B) The quality of high school education improved.
- (C) Compared to the 1970's, a greater number of high schools offered vocational guidance programs for their students.
- (D) The proportion of the population with at least a college-level education increased.
- (E) There was for the first time in 20 years an oversupply of job seekers with only high school diplomas.
17. Working shorter workweeks causes managers to feel less stress than does working longer workweeks. In addition, greater perceived control over one's work life reduces stress levels. It can be concluded, therefore, that shorter workweeks cause managers to feel they have more control over their work life.
- The argument made above uses which of the following questionable techniques?
- (A) Associating two conditions as cause and effect on the basis of their being causally associated with the same phenomenon
- (B) Taking for granted that two factors that have a certain effect individually produce that effect more strongly when both act together.
- (C) Assuming what it sets out to prove
- (D) Using an irrelevant point in order to draw a conclusion
- (E) Basing a conclusion on preconceived views about the needs of managers
18. There are fundamentally two possible changes in an economy that will each cause inflation unless other compensating changes also occur. These changes are either reductions in the supply of goods and services or increases in demand. In a prebanking economy the quantity of money available, and hence the level of demand, is equivalent to the quantity of gold available.
- If the statements above are true, then it is also true that in a prebanking economy
- (A) any inflation is the result of reductions in the supply of goods and services
- (B) if other factors in the economy are unchanged, increasing the quantity of gold available will lead to inflation
- (C) if there is a reduction in the quantity of gold available, then, other things being equal, inflation must result
- (D) the quantity of goods and services purchasable by a given amount of gold is constant
- (E) whatever changes in demand occur, there will be compensating changes in the supply of goods and services
19. Industrialists from the country Distopia were accused of promoting the Distopian intervention in the Arcadian civil war merely to insure that the industrialists' facilities in Arcadia made substantial profits during the war. Yet this cannot be the motive since, as the Distopians foresaw, Distopia's federal expenses for the intervention were eight billion dollars, whereas, during the

war, profits from the Distopian industrialists' facilities in Arcadia totaled only four billion dollars.

Which of the following, if true, exposes a serious flaw in the argument made in the second sentence above?

- (A) During the Arcadian war, many Distopian industrialists with facilities located in Arcadia experienced a significant rise in productivity in their facilities located in Distopia
- (B) The largest proportion of Distopia's federal expenses is borne by those who receive no significant industrial profits.
- (C) Most Distopian industrialists' facilities located in Arcadia are expected to maintain the level of profits they achieved during the war.
- (D) Distopian industrialists' facilities in Arcadia made substantial profits before the events that triggered the civil war.
- (E) Many Distopians expressed concern over the suffering that Arcadians underwent during the civil war.

20. In the United States, injuries to passengers involved in automobile accidents are typically more severe than in Europe, where laws require a different kind of safety belt. It is clear from this that the United States needs to adopt more stringent standards for safety belt design to protect automobile passengers better.

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

- (A) Europeans are more likely to wear safety belts than are people in the United States.
- (B) Unlike United States drivers, European drivers receive training in how best to react in the event of an accident to minimize injuries to themselves and to their passengers.
- (C) Cars built for the European market tend to have more sturdy construction than do cars built for the United States market.
- (D) Automobile passengers in the United States have a greater statistical chance of being involved in an accident than do passengers in Europe.
- (E) States that have recently begun requiring the European safety belt have experienced no reduction in the average severity of injuries suffered by passengers in automobile accidents.

### CRITICAL REASONING TEST SECTION 11

30 Minutes 20 Questions

1. The school board has determined that it is necessary to reduce the number of teachers on the staff. Rather than deciding which teachers will be laid off on the basis of seniority, the school board plans to lay off the least effective teachers first.

The school board's plan assumes that

- (A) there is a way of determining the effectiveness of teachers
- (B) what one individual defines as effective teaching will not be defined as effective teaching by another individual
- (C) those with the most experience teaching are the best teachers
- (D) those teachers who are paid the most are generally the most qualified
- (E) some teachers will be more effective working with some students than with other students

2. Since applied scientific research is required for technological advancement, many have rightly urged an increased emphasis in universities on applied research. But we must not give too little attention to basic research, even though it may have no foreseeable application, for tomorrow's applied research will depend on the basic research of today.

If the statements above are true, which of the following can be most reliably inferred?

- (A) If future technological advancement is desired, basic research should receive greater



- emphasis than applied research.
- (B) If basic research is valued in universities, applied research should be given less emphasis than it currently has.
  - (C) If future technological advancement is desired, research should be limited to that with some foreseeable application.
  - (D) If too little attention is given to basic research today, future technological advancement will be jeopardized.
  - (E) If technological advancement is given insufficient emphasis, basic research will also receive too little attention.
3. The First Banking Group's decision to invest in an electronic network for transferring funds was based on a cost advantage over a nonelectronic system of about ten dollars per transaction in using an electronic system. Executives reasoned further that the system would give them an advantage over competitors.

Which of the following, if it is a realistic possibility, most seriously weakens the executives' projection of an advantage over competitors?

- (A) The cost advantage of using the electronic system will not increase sufficiently to match the pace of inflation.
  - (B) Competitors will for the same reasons install electronic systems, and the resulting overcapacity will lead to mutually damaging price wars.
  - (C) The electronic system will provide a means for faster transfer of funds, if the First Banking Group wishes to provide faster transfer to its customers.
  - (D) Large banks from outside the area served by the First Banking Group have recently established branches in that area as competitors to the First Banking Group.
  - (E) Equipment used in the electronic network for transferring funds will be compatible with equipment used in other such networks.
4. Which of the following best completes the argument below?

One effect of the introduction of the electric refrigerator was a collapse in the market for ice. Formerly householders had bought ice to keep their iceboxes cool and the food stored in the iceboxes fresh. Now the iceboxes cool themselves. Similarly, the introduction of crops genetically engineered to be resistant to pests will-----.

- (A) increase the size of crop harvests
  - (B) increase the cost of seeds
  - (C) reduce demand for chemical pesticides
  - (D) reduce the value of farmland
  - (E) reduce the number of farmers keeping livestock
5. In 1985 the city's Fine Arts Museum sold 30,000 single-entry tickets. In 1986 the city's Folk Arts and Interior Design museums opened, and these three museums together sold over 80,000 such tickets that year. These museums were worth the cost, since more than twice as many citizens are now enjoying the arts.

Which of the following, if true, most seriously weakens the author's assertion that more than twice as many citizens are now enjoying the arts?

- (A) Most visitors to one museum also visit the other two.
- (B) The cost of building the museums will not be covered by revenues generated by the sale of museum tickets.
- (C) As the two new museums become better known, even more citizens will visit them.
- (D) The city's Fine Arts Museum did not experience a decrease in single-entry tickets sold in 1986.
- (E) Fewer museum entry tickets were sold in 1986 than the museum planners had hoped to sell.

6. F: We ought not to test the safety of new drugs on sentient animals, such as dogs and rabbits. Our benefit means their pain, and they are equal to us in the capacity to feel pain.

G: We must carry out such tests; otherwise, we would irresponsibly sacrifice the human lives that could have been saved by the drugs.

Which of the following, if true, is the best objection that could be made from F's point of view to counter G's point?

- (A) Even though it is not necessary for people to use cosmetics, cosmetics are also being tested on sentient animals.
- (B) Medical science already has at its disposal a great number of drugs and other treatments for serious illnesses.
- (C) It is not possible to obtain scientifically adequate results by testing drugs in the test tube, without making tests on living tissue.
- (D) Some of the drugs to be tested would save human beings from great pain.
- (E) Many tests now performed on sentient animals can be performed equally well on fertilized chicken eggs that are at a very early stage of development.

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

The unemployment rate in the United States fell from 7.5 percent in 1981 to 6.9 percent in 1986.

It cannot, however, be properly concluded from these statistics that the number of unemployed in 1986 was lower than it had been in 1981 because-----.

- (A) help-wanted advertisements increased between 1981 and 1986
- (B) many of the high-paying industrial jobs available in 1981 were replaced by low-wage service jobs in 1986, resulting in displacements of hundreds of thousands of workers
- (C) in some midwestern industrial states, the unemployment rate was much higher in 1986 than

it had been in 1981

- (D) the total available work force, including those with and without employment, increased between 1981 and 1986

- (E) the average time that employees stay in any one job dropped during the period 1981 to 1986

8. To reduce costs, a company is considering a drastic reduction in the number of middle-level managers. This reduction would be accomplished by first offering early retirement to those 50 years of age or older with 15 years of service, and then by firing enough of the others to bring the overall reduction to 50 percent.

Each of the following, assuming that it is a realistic possibility, is a possible disadvantage to the company of the plan EXCEPT:

- (A) Loyalty to the company will be reduced among those surviving the reduction, because they will perceive the status of even good managers as uncertain.
- (B) The restructuring of managerial jobs will allow business units to be adapted to fit a changing business environment.
- (C) The company will have a smaller pool of managers from which to choose in selecting future senior managers.
- (D) Some of the best managers, unsure of their security against being fired, will choose early retirement.
- (E) The increased workload of managers remaining with the company will subject them to stress that will eventually affect their performance.

9. In order to relieve congestion in the airspace near the airports of a certain country, transportation officials propose sending passengers by new rapid trains between the country's major airport and several small cities within a 300-mile radius of it. This plan was proposed even though the officials realized that it is the major airport that is congested, not those in the small cities.

The plan to relieve congestion would work best if which of the following were true about the major airport?

- (A) Rail tickets between the airport and the small cities will most likely cost more than the current air tickets for those routes.
- (B) Most passengers who frequently use the airport prefer to reach their cities of destination exclusively by air, even if they must change planes twice.
- (C) There are feasible changes in the airport's traffic control system which would significantly relieve congestion.
- (D) Some of the congestion the airport experiences could be relieved if more flights were scheduled at night and at other off-peak hours.
- (E) A significant proportion of the airport's traffic consists of passengers transferring between international flights and flights to the small cities.

Questions 10-11 are based on the following.

An annually conducted, nationwide survey shows a continuing marked decline in the use of illegal drugs by high school seniors over the last three years.

10. Which of the following, if true, casts most doubt on the relevance of the survey results described above for drawing conclusions about illegal drug use in the teen-age population as a whole?

- (A) Because of cuts in funding, no survey of illegal drug use by high school seniors will be conducted next year.
- (B) The decline uncovered in the survey has occurred despite the decreasing cost of illegal drugs.
- (C) Illegal drug use by teen-agers is highest in those areas of the country where teen-agers are least likely to stay in high school for their senior year.
- (D) Survey participants are more likely now than they were three years ago to describe as "heroic" people who were addicted to illegal drugs and have been able to quit.
- (E) The proportion of high school seniors who say that they strongly disapprove of illegal drug use has declined over the last three years.

11. Which of the following, if true, would provide most support for concluding from the survey results

described above that the use of illegal drugs by people below the age of 20 is declining?

- (A) Changes in the level of drug use by high school seniors are seldom matched by changes in the level of drug use by other people below the age of 20.
- (B) In the past, high school seniors were consistently the population group most likely to use illegal drugs and most likely to use them heavily.
- (C) The percentage of high school seniors who use illegal drugs is consistently very similar to the percentage of all people below the age of 20 who use illegal drugs.
- (D) The decline revealed by the surveys is the result of drug education programs specifically targeted at those below the age of 20.
- (E) The number of those surveyed who admit to having sold illegal drugs has declined even faster than has the number who have used drugs.

12. President of the United States: I have received over 2,000 letters on this issue, and the vast majority of them support my current position. These letters prove that most of the people in the country agree with me.

Which of the following, if true, most weakens the President's conclusion?

- (A) The issue is a very divisive one on which many people have strong opinions.
- (B) Some members of Congress disagree with the President's position.
- (C) People who disagree with the President feel more strongly about the issue than do people who agree with him.
- (D) People who agree with the President are more likely to write to him than are people who disagree with him.

- (E) During the presidential campaign, the President stated a position on this issue that was somewhat different from his current position.

13. Some governments have tried to make alcohol and tobacco less attractive to consumers by regulating what can be shown in advertisements for these products, rather than by banning advertising of them altogether. However, the need to obey the letter of these restrictions has actually stimulated advertisers to create advertisements that are more inventive and humorous than they were prior to the restrictions' introduction.

which of the following, if true, would, in conjunction with the statements above, best support the conclusion that the government policy described above fails to achieve its objective?

- (A) Because of the revenues gained from the sale of alcohol and tobacco, governments have no real interest in making these products less attractive to consumers.
- (B) Advertisers tend to create inventive and humorous advertisements only if they have some particular reason to do so.
- (C) Banning advertising of alcohol and tobacco is a particularly effective way of making these products less attractive to consumers.
- (D) With the policy in place, advertisements for alcohol and tobacco have become far more inventive and humorous than advertisements for other kinds of products.
- (E) The more inventive an advertisement is, the more attractive it makes the advertised product appear.

14. Which of the following, if true, best completes the argument below?

Comparisons of the average standards of living of the citizens of two countries should reflect the citizens' comparative access to goods and services. Reliable figures in a country's own currency for the average income of its citizens are easily obtained. But it is difficult to get an accurate comparison of average standards of living from these figures. because-----.

- (A) there are usually no figures comparing how much of two different currencies must be spent in order to purchase a given quantity of goods and services
- (B) wage levels for the same job vary greatly from country to country, depending on cultural as well as on purely economic factors
- (C) these figures must be calculated by dividing the gross national product of a country by the size of its population
- (D) comparative access to goods and services is only one of several factors relevant in determining quality of life
- (E) the wealth, and hence the standard of living, of a country's citizens is very closely related to their income

15. The level of lead contamination in United States rivers declined between 1975 and 1985.

Federal regulations requiring a drop in industrial discharges of lead went into effect in 1975, but the major cause of the decline was a 75 percent drop in the use of leaded gasoline between 1975 and 1985.

Which of the following, if true, best supports the claim that the major cause of the decline in the level of lead contamination in United States rivers was the decline in the use of leaded gasoline?

- (A) The level of lead contamination in United States rivers fell sharply in both 1975 and 1983.
- (B) Most of the decline in industrial discharges of lead occurred before 1976, but the largest decline in the level of river contamination occurred between 1980 and 1985.
- (C) Levels of lead contamination in rivers fell sharply in 1975-1976 and rose very slightly over the next nine years.
- (D) Levels of lead contamination rose in those rivers where there was reduced river flow due to drought.
- (E) Although the use of leaded gasoline declined 75 percent between 1975 and 1985, 80 percent of the decline took place in 1985.

16. George Bernard Shaw wrote: " That any sane nation, having observed that you could provide for the supply of bread by giving bakers a pecuniary interest in baking for you, should go on to give a surgeon a pecuniary interest in cutting off your leg is enough to make one despair of political humanity."

Shaw's statement would best serve as an illustration in an argument criticizing which of the following?

- (A) Dentists who perform unnecessary dental work in order to earn a profit
  - (B) Doctors who increase their profits by specializing only in diseases that affect a large percentage of the population
  - (C) Grocers who raise the price of food in order to increase their profit margins
  - (D) Oil companies that decrease the price of their oil in order to increase their market share
  - (E) Bakers and surgeons who earn a profit by supplying other peoples' basic needs
17. Since 1975 there has been in the United States a dramatic decline in the incidence of traditional childhood diseases such as measles. This decline has been accompanied by an increased incidence of Peterson's disease, a hitherto rare viral infection, among children. Few adults, however, have been affected by the disease.

Which of the following, if true, would best help to explain the increased incidence of Peterson's disease among children?

- (A) Hereditary factors determine in part the degree to which a person is susceptible to the virus that causes Peterson's disease.
  - (B) The decrease in traditional childhood diseases and the accompanying increase in Peterson's disease have not been found in any other country.
  - (C) Children who contract measles develop an immunity to the virus that causes Peterson's disease.
  - (D) Persons who did not contract measles in childhood might contract measles in adulthood, in which case the consequences of the disease would generally be more severe.
  - (E) Those who have contracted Peterson's disease are at increased risk of contracting chicken pox.
18. Many plant varieties used in industrially developed nations to improve cultivated crops come from less-developed nations. No compensation is paid on the grounds that the plants used are "the common heritage of humanity." Such reasoning is, however, flawed. After all, no one suggests that coal, oil, and ores should be extracted without payment.

Which of the following best describes an aspect of the method used by the author in the argument above?

- (A) The author proceeds from a number of specific observations to a tentative generalization.
  - (B) The author applies to the case under discussion facts about phenomena assumed to be similar in some relevant respect.
  - (C) A position is strengthened by showing that the opposite of that position would have logically absurd consequences.
  - (D) A line of reasoning is called into question on the grounds that it confuses cause and effect in a causal relation.
  - (E) An argument is analyzed by separating statements of fact from individual value judgments.
19. It is widely assumed that a museum is helped financially when a generous patron donates a potential exhibit. In truth, however, donated objects require storage space, which is not free, and routine conservation, which is rather expensive. Therefore, such gifts exacerbate rather than lighten the demands made on a museum's financial resources.

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

- (A) To keep patrons well disposed, a museum will find it advisable to put at least some donated objects on exhibit rather than merely in storage.
- (B) The people who are most likely to donate valuable objects to a museum are also the people who are most likely to make cash gifts to it.
- (C) A museum cannot save money by resorting to cheap storage under less than adequate

- conditions, because so doing would drive up the cost of conservation.
- (D) Patrons expect a museum to keep donated objects in its possession rather than to raise cash by selling them.
- (E) Objects donated by a patron to a museum are often of such importance that the museum would be obliged to add them to its collection through purchase if necessary.

20. Despite the approach of winter, oil prices to industrial customers are exceptionally low this year and likely to remain so. Therefore, unless the winter is especially severe, the price of natural gas to industrial customers is also likely to remain low.

Which of the following, if true, provides the most support for the conclusion above?

- (A) Long-term weather forecasts predict a mild winter.
- (B) The industrial users who consume most natural gas can quickly and cheaply switch to using oil instead.
- (C) The largest sources of supply for both oil and natural gas are in subtropical regions unlikely to be affected by winter weather.
- (D) The fuel requirements of industrial users of natural gas are not seriously affected by the weather.
- (E) Oil distribution is more likely to be affected by severe winter weather than is the distribution of natural gas.

### CRITICAL REASONING TEST SECTION 12

30 Minutes 20 Questions

1. The country of Maravia has severe air pollution, 80 percent of which is caused by the exhaust fumes of cars. In order to reduce the number of cars on the road, the government is raising taxes on the cost of buying and running a car by 20 percent. This tax increase, therefore, will significantly reduce air pollution in Maravia.

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

- (A) The government of Maravia is in the process of building a significant number of roadways.
- (B) Maravia is an oil-producing country and is able to refine an amount of gasoline sufficient for the needs of its population.
- (C) Maravia has had an excellent public transportation system for many years.
- (D) Ninety percent of the population of Maravia is very prosperous and has a substantial amount of disposable income.
- (E) In Maravia, cars that emit relatively low levels of pollutants cost 10 percent less to operate, on average, than do cars that emit high levels of pollutants.

2. Consumer income reports produced by the government distinguish between households and families by means of the following definition: "A family is a household containing a householder and at least one person related to the householder." Except for the homeless and people in group living quarters, most people live in households.

According to the definition above, which of the following must be true?

- (A) All householders are members of families.
- (B) All families include a householder.
- (C) All of the people related to a householder form a family.
- (D) Some people residing in group living quarters are members of families.
- (E) Some homeless people reside in group living quarters.

Questions 3-4 are based on the following.

The proportion of manufacturing companies in Alameda that use microelectronics in their manufacturing processes increased from 6 percent in 1979 to 66 percent in 1990. Many labor leaders say that the introduction of microelectronics is the principal cause of the great increase in unemployment during that period in Alameda. In actual fact, however, most of the job losses were

due to organizational changes. Moreover, according to new figures released by the labor department, there were many more people employed in Alameda in the manufacturing industry in 1990 than in 1979.

3. Which of the following, if true, best reconciles the discrepancy between the increase in unemployment and the increase in jobs in the manufacturing industry of Alameda?
- (A) Many products that contain microelectronic components are now assembled completely by machine.
  - (B) Workers involved in the various aspects of the manufacturing processes that use microelectronic technology need extensive training.
  - (C) It is difficult to evaluate numerically what impact on job security the introduction of microelectronics in the workplace had before 1979.
  - (D) In 1990 over 90 percent of the jobs in Alameda's manufacturing companies were filled by workers who moved to Alameda because they had skills for which there was no demand in Alameda prior to the introduction of microelectronics there.
  - (E) Many workers who have retired from the manufacturing industry in Alameda since 1979 have not been replaced by younger workers.
4. Which of the following, if true, would most strengthen the labor leaders' claim concerning the manufacturing industry in Alameda?
- (A) From 1979 to 1990, fewer employees of manufacturing companies in Alameda lost their jobs because of the introduction of microelectronics than did employees of manufacturing companies in the nearby community of Rockside.
  - (B) The figures on the use of microelectronics that were made public are the result of inquiries made of managers in the manufacturing industry in Alameda.
  - (C) The organizational changes that led to job losses in all sectors of the manufacturing industry in Alameda were primarily the result of the introduction of microelectronics.
  - (D) Figures on job losses in the manufacturing industry in Alameda for the late sixties and early seventies have not been made available.
  - (E) A few jobs in the manufacturing industry in Alameda could have been saved if workers had been willing to become knowledgeable in microelectronics.
5. The number of musicians employed to play accompaniment for radio and television commercials has sharply decreased over the past ten years. This has occurred even though the number of commercials produced each year has not significantly changed for the last ten years.
- Which of the following, if it occurred during the past ten years, would contribute LEAST to an explanation of the facts above?
- (A) The type of music most popular for use in commercials has changed from a type that requires a large number of instruments to a type that requires very few instruments.
  - (B) There has been an increase in the number of commercials that use only the spoken word and sound effects, rather than musical accompaniment.
  - (C) There has been an increase in the number of commercials that use a synthesizer, an instrument on which one musician can reproduce the sound of many musicians playing together.
  - (D) There has been an increase in the number of commercials that use prerecorded music as their only source of music.
  - (E) There has been an increase in the number of commercials that use musicians just starting in the music industry rather than musicians experienced in accompanying commercials.
6. Recent audits revealed that BanqueCard, a credit service, has erred in calculating the interest it charges its clients. But BanqueCard's chief accountant reasoned that the profits that the

company shows would remain unaffected by a revision of its clients', credit statements to correct its previous billing errors, since just as many clients had been overcharged as undercharged.

Which of the following is a reasoning error that the accountant makes in concluding that correcting its clients' statements would leave BanqueCard's profits unaffected?

- (A) Relying on the reputation of BanqueCard as a trustworthy credit service to maintain the company's clientele after the error becomes widely known
- (B) Failing to establish that BanqueCard charges the same rates of interest for all of its clients
- (C) Overlooking the possibility that the amount by which BanqueCard's clients had been overcharged might be greater than the amount by which they had been undercharged
- (D) Assuming that the clients who had been overcharged by BanqueCard had not noticed the error in their credit bills
- (E) Presupposing that each one of BanqueCard's clients had either been overcharged or else had been undercharged by the billing error

## 7. Not Scored

8. Residents of an apartment complex are considering two possible plans for collecting recyclable trash. Plan 1-Residents will deposit recyclable trash in municipal dumpsters located in the parking lot. The trash will be collected on the first and the fifteenth days of each month.

Plan 2-Residents will be given individual containers for recyclable trash. The containers will be placed at the curb twice a week for trash collection.

Which of the following points raised at a meeting of the residents, if valid, would most favor one of the recycling plans over the other?

- (A) Residents will be required to exercise care in separating recyclable trash from nonrecyclable trash.
  - (B) For trash recycling to be successful, residents must separate recyclable bottles and cans from recyclable paper products.
  - (C) Penalties will be levied against residents who fail to sort their trash correctly.
  - (D) Individual recycling containers will need to be made of a strong and durable material.
  - (E) Recyclable trash that is allowed to accumulate for two weeks will attract rodents.
9. In 1990 all of the people who applied for a job at Evco also applied for a job at Radeco, and Evco and Radeco each offered jobs to half of these applicants. Therefore, every one of these applicants must have been offered a job in 1990.

The argument above is based on which of the following assumptions about these job applicants?

- (A) All of the applicants were very well qualified for a job at either Evco or Radeco.
  - (B) All of the applicants accepted a job at either Evco or Radeco.
  - (C) None of the applicants was offered a job by both Evco and Radeco.
  - (D) None of the applicants had applied for jobs at places other than Evco and Radeco.
  - (E) None of the applicants had previously worked for either Evco or Radeco.
10. The geese that gather at the pond of a large corporation create a hazard for executives who use the corporate helicopter, whose landing site is 40 feet away from the pond. To solve the problem, the corporation plans to import a large number of herding dogs to keep the geese away from the helicopter.
- Which of the following, if a realistic possibility, would cast the most serious doubt on the prospects for success of the corporation's plan?



- (A) The dogs will form an uncontrollable pack.  
(B) The dogs will require training to learn to herd the geese.  
(C) The dogs will frighten away foxes that prey on old and sick geese.  
(D) It will be necessary to keep the dogs in quarantine for 30 days after importing them.  
(E) Some of the geese will move to the pond of another corporation in order to avoid being herded by the dogs.
11. When a person is under intense psychological stress, his or her cardiovascular response is the same as it is during vigorous physical exercise. Psychological stress, then, must be beneficial for the heart as is vigorous physical exercise.
- The argument above relies on which of the following assumptions?
- (A) Exercise is an effective means of relieving psychological stress.  
(B) The body's short-term cardiovascular response to any activity indicates that activity's long-term effect on the body.  
(C) Cardiovascular response during an activity is an adequate measure of how beneficial the activity is for the heart.  
(D) Psychological stress can have a positive effect on the body.  
(E) Vigorous exercise is the most reliable method of maintaining a healthy heart.
12. After graduating from high school, people rarely multiply fractions or discuss ancient Rome, but they are confronted daily with decisions relating to home economics. Yet whereas mathematics and history are required courses in the high school curriculum, home economics is only an elective, and few students choose to take it.
- Which of the following positions would be best supported by the considerations above?
- (A) If mathematics and history were not required courses, few students would choose to take them.  
(B) Whereas home economics would be the most useful subject for people facing the decisions they must make in daily life, often mathematics and history can also help them face these decisions.  
(C) If it is important to teach high school students subjects that relate to decisions that will confront them in their daily lives, then home economics should be made an important part of the high school curriculum.  
(D) Mathematics, history, and other courses that are not directly relevant to a person's daily life should not be a required part of the high school curriculum.  
(E) Unless high schools put more emphasis on nonacademic subjects like home economics, people graduating from high school will never feel comfortable about making the decisions that will confront them in their daily lives.
13. Houses built during the last ten years have been found to contain indoor air pollution at levels that are, on average, much higher than the levels found in older houses. The reason air-pollution levels are higher in the newer houses is that many such houses are built near the sites of old waste dumps or where automobile emissions are heavy.
- Which of the following, if true, calls into question the explanation above?
- (A) Many new houses are built with air-filtration systems that remove from the house pollutants that are generated indoors.  
(B) The easing of standards for smokestack emissions has led to an increase in air-pollution levels in homes.  
(C) New houses built in secluded rural areas are relatively free of air pollutants.  
(D) Warm-weather conditions tend to slow down the movement of air, thus keeping pollution trapped near its source.  
(E) Pressboard, an inexpensive new plywood substitute now often used in the construction of houses, emits the pollutant formaldehyde into the house.
14. The most important aspect of moviemaking is conveying a scene's rhythm. Conveying rhythm

depends less on the artistic quality of the individual photographic images than on how the shots go together and the order in which they highlight different aspects of the action taking place in front of the camera.

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

- (A) The artistic quality of the individual photographic image is unimportant in movie photography.
- (B) Photographers known for the superb artistic quality of their photographs are seldom effective as moviemakers.
- (C) Having the ability to produce photographs of superb artistic quality does not in itself guarantee having the ability to be a good moviemaker.
- (D) Movie photographers who are good at their jobs rarely give serious thought to the artistic quality of the photographs they take.
- (E) To convey a scene's rhythm effectively, a moviemaker must highlight many different aspects of the action taking place.

15. Human beings can see the spatial relations among objects by processing information conveyed by light. Scientists trying to build computers that can detect spatial relations by the same kind of process have so far designed and built stationary machines. However, these scientists will not achieve their goal until they produce such a machine that can move around in its environment.

Which of the following, if true, would best support the prediction above?

- (A) Human beings are dependent on visual cues from motion in order to detect spatial relations.
- (B) Human beings can often easily detect the spatial relations among objects, even when those objects are in motion.
- (C) Detecting spatial relations among objects requires drawing inferences from the information conveyed by light.
- (D) Although human beings can discern spatial relations through their sense of hearing, vision is usually the most important means of detecting spatial relations.
- (E) Information about the spatial relations among objects can be obtained by noticing such things as shadows and the relative sizes of objects.

16. In a study of the effect of color on productivity, 50 of 100 factory workers were moved from their drab workroom to a brightly colored workroom. Both these workers and the 50 who remained in the drab workroom increased their productivity, probably as a result of the interest taken by researchers in the work of both groups during the study.

Which of the following, if true, would cast most doubt upon the author's interpretation of the study results given above?

- (A) The 50 workers moved to the brightly colored room performed precisely the same manufacturing task as the workers who remained in the drab workroom.
- (B) The drab workroom was designed to provide adequate space for at most 65 workers.
- (C) The 50 workers who moved to the brightly colored workroom were matched as closely as possible in age and level of training to the 50 workers who remained in the drab workroom.
- (D) Nearly all the workers in both groups had volunteered to move to the brightly colored workroom.
- (E) Many of the workers who moved to the brightly colored workroom reported that they liked the drab workroom as well as or better than they liked the brightly colored workroom.

18. Manager: Accounting and Billing are located right next to each other and the two departments do similar kinds of work; yet expenditures for clerical supplies charged to Billing are much higher. Is Billing wasting supplies?

Head of Billing: Not at all.

Which of the following, if true, best supports the position of the Head of Billing?

- (A) There are more staff members in Accounting than in Billing.  
 (B) Two years ago, expenditures in Accounting for clerical supplies were the same as were expenditures that year in Billing for clerical supplies.  
 (C) The work of Billing now requires a wider variety of clerical supplies than it did in the past.  
 (D) Some of the paper-and-pencil work of both Accounting and Billing has been replaced by work done on computers.  
 (E) Members of Accounting found the clerical-supplies cabinet of Billing more convenient to go to for supplies than their own department's cabinet.
19. Most geologists believe oil results from chemical transformations of hydrocarbons derived from organisms buried under ancient seas. Suppose, instead, that oil actually results from bacterial action on other complex hydrocarbons that are trapped within the Earth. As is well known, the volume of these hydrocarbons exceeds that of buried organisms. Therefore, our oil reserves would be greater than most geologists believe.
- Which of the following, if true, gives the strongest support to the argument above about our oil reserves?
- (A) Most geologists think optimistically about the Earth's reserves of oil.  
 (B) Most geologists have performed accurate chemical analyses on previously discovered oil reserves.  
 (C) Ancient seas are buried within the Earth at many places where fossils are abundant.  
 (D) The only bacteria yet found in oil reserves could have leaked down drill holes from surface contaminants.  
 (E) Chemical transformations reduce the volume of buried hydrocarbons derived from organisms by roughly the same proportion as bacterial action reduces the volume of other complex hydrocarbons.
20. The wild mouflon sheep of the island of Corsica are direct descendants of sheep that escaped from domestication on the island 8,000 years ago. They therefore provide archaeologists with a picture of what some early domesticated sheep looked like, before the deliberate selective breeding that produced modern domesticated sheep began.

The argument above makes which of the following assumptions?

- (A) The domesticated sheep of 8,000 years ago were quite dissimilar from the wild sheep of the time.  
 (B) There are no other existing breeds of sheep that escaped from domestication at about the same time as the forebears of the mouflon.  
 (C) Modern domesticated sheep are direct descendants of sheep that were wild 8,000 years ago.  
 (D) Mouflon sheep are more similar to their forebears of 8,000 years ago than modern domesticated sheep are to theirs.  
 (E) The climate of Corsica has not changed at all in the last 8,000 years.

### CRITICAL REASONING TEST SECTION 13

25 Minutes 16 Questions

1. Cable-television spokesperson: Subscriptions to cable television are a bargain in comparison to "free" television. Remember that "free" television is not really free. It is consumers, in the end, who pay for the costly advertising that supports "free" television.

Which of the following, if true, is most damaging to the position of the cable-television spokesperson?

- (A) Consumers who do not own television sets are less likely to be influenced in their purchasing decisions by television advertising than are consumers who own television sets.  
 (B) Subscriptions to cable television include access to some public-television channels, which do not accept advertising.  
 (C) For locations with poor television reception, cable television provides picture quality

- superior to that provided by free television.
- (D) There is as much advertising on many cable television channels as there is on "free" television channels.
- (E) Cable-television subscribers can choose which channels they wish to receive, and the fees vary accordingly.

2. Woodsmoke contains dangerous toxins that cause changes in human cells. Because woodsmoke presents such a high health risk, legislation is needed to regulate the use of open-air fires and wood-burning stoves.

Which of the following, if true, provides the most support for the argument above?

- (A) The amount of dangerous toxins contained in woodsmoke is much less than the amount contained in an equal volume of automobile exhaust.
- (B) Within the jurisdiction covered by the proposed legislation, most heating and cooking is done with oil or natural gas.
- (C) Smoke produced by coal-burning stoves is significantly more toxic than smoke from wood-burning stoves.
- (D) No significant beneficial effect on air quality would result if open-air fires were banned within the jurisdiction covered by the proposed legislation.
- (E) In valleys where wood is used as the primary heating fuel, the concentration of smoke results in poor air quality.
3. Within 20 years it will probably be possible to identify the genetic susceptibility an individual may have toward any particular disease. Eventually, effective strategies will be discovered to counteract each such susceptibility. Once these effective strategies are found, therefore, the people who follow them will never get sick.

The argument above is based on which of the following assumptions?

- (A) For every disease there is only one strategy that can prevent its occurrence.
- (B) In the future, genetics will be the only medical specialty of any importance.
- (C) All human sicknesses are in part the result of individuals' genetic susceptibilities.
- (D) All humans are genetically susceptible to some diseases.
- (E) People will follow medical advice when they are convinced that it is effective.
4. Most employees in the computer industry move from company to company, changing jobs several times in their careers. However, Summit Computers is known throughout the industry for retaining its employees. Summit credits its success in retaining employees to its informal, nonhierarchical work environment.

Which of the following, if true, most strongly supports Summit's explanation of its success in retaining employees?

- (A) Some people employed in the computer industry change jobs if they become bored with their current projects
- (B) A hierarchical work environment hinders the cooperative exchange of ideas that computer industry employees consider necessary for their work.
- (C) Many of Summit's senior employees had previously worked at only one other computer company.
- (D) In a nonhierarchical work environment, people avoid behavior that might threaten group harmony and thus avoid discussing with their colleagues any dissatisfaction they might have with their jobs.
- (E) The cost of living near Summit is relatively low compared to areas in which some other computer companies are located.
5. Financing for a large construction project was provided by a group of banks. When the money was gone before the project was completed, the banks approved additional loans. Now, with funds used up again and completion still not at hand, the banks refuse to extend further loans,

although without those loans, the project is doomed.

Which of the following, if true, best explains why the bank's current reaction is different from their reaction in the previous instance of depletion of funds?

- (A) The banks have reassessed the income potential of the completed project and have concluded that total income generable would be less than total interest due on the old plus the needed new loans.
- (B) The banks have identified several other projects that offer faster repayment of the principal if loans are approved now to get those projects started.
- (C) The banks had agreed with the borrowers that the construction loans would be secured by the completed project.
- (D) The cost overruns were largely due to unforeseeable problems that arose in the most difficult phase of the construction work.
- (E) The project stimulated the development and refinement of several new construction techniques, which will make it easier and cheaper to carry out similar projects in the future.

6. Low-income families are often unable to afford as much child care as they need. One government program would award low-income families a refund on the income taxes they pay of as much as \$1,000 for each child under age four. This program would make it possible for all low-income families with children under age four to obtain more child care than they otherwise would have been able to afford.

Which of the following, if true, most seriously calls into question the claim that the program would make it possible for all low-income families to obtain more child care?

- (A) The average family with children under age four spends more than \$1,000 a year on child care.
- (B) Some low-income families in which one of the parents is usually available to care for children under age four may not want to spend their income tax refund on child care.
- (C) The reduction in government revenues stemming from the income tax refund will necessitate cuts in other government programs, such as grants for higher education.
- (D) Many low-income families with children under age four do not pay any income taxes because their total income is too low to be subject to such taxes.
- (E) Income taxes have increased substantially over the past twenty years, reducing the money that low-income families have available to spend on child care.

7. Not scored

8. Although parapsychology is often considered a pseudoscience, it is in fact a genuine scientific enterprise, for it uses scientific methods such as controlled experiments and statistical tests of clearly stated hypotheses to examine the questions it raises

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

- (A) If a field of study can conclusively answer the questions it raises, then it is a genuine science.
- (B) Since parapsychology uses scientific methods, it will produce credible results.
- (C) Any enterprise that does not use controlled experiments and statistical tests is not genuine science.
- (D) Any field of study that employs scientific methods is a genuine scientific enterprise.
- (E) Since parapsychology raises clearly statable questions, they can be tested in controlled experiments.

9. Hotco oil burners, designed to be used in asphalt plants, are so efficient that Hotco will sell one to the Clifton Asphalt plant for no payment other than the cost savings between the total amount the asphalt plant actually paid for oil using its former burner during the last two years and the total amount it will pay for oil using the Hotco burner during the next two years. On installation, the plant will make an estimated payment, which will be adjusted after two years to equal the

actual cost savings.

Which of the following, if it occurred, would constitute a disadvantage for Hotco of the plan described above?

- (A) Another manufacturer's introduction to the market of a similarly efficient burner
- (B) The Clifton Asphalt plant's need for more than one new burner
- (C) Very poor efficiency in the Clifton Asphalt plant's old burner
- (D) A decrease in the demand for asphalt
- (E) A steady increase in the price of oil beginning soon after the new burner is installed

10. Today's low gasoline prices make consumers willing to indulge their preference for larger cars, which consume greater amounts of gasoline as fuel. So United States automakers are unwilling to pursue the development of new fuel-efficient technologies aggressively. The particular reluctance of the United States automobile industry to do so, however, could threaten the industry's future.

Which of the following, if true, would provide the most support for the claim above about the future of the United States automobile industry?

- (A) A prototype fuel-efficient vehicle, built five years ago, achieves a very high 81 miles per gallon on the highway and 63 in the city, but its materials are relatively costly.
- (B) Small cars sold by manufacturers in the United States are more fuel efficient now than before the sudden jump in oil prices in 1973.
- (C) Automakers elsewhere in the world have slowed the introduction of fuel-efficient technologies but have pressed ahead with research and development of them in preparation for a predicted rise in world oil prices.
- (D) There are many technological opportunities for reducing the waste of energy in cars and light trucks through weight, aerodynamic drag, and braking friction.
- (E) The promotion of mass transit over automobiles as an alternative mode of transportation has encountered consumer resistance that is due in part to the failure of mass transit to accommodate the wide dispersal of points of origin and destinations for trips.

11. An experiment was done in which human subjects recognize a pattern within a matrix of abstract designs and then select another design that completes that pattern. The results of the experiment were surprising. The lowest expenditure of energy in neurons in the brain was found in those subjects who performed most successfully in the experiments.

Which of the following hypotheses best accounts for the findings of the experiment?

- (A) The neurons of the brain react less when a subject is trying to recognize patterns than when the subject is doing other kinds of reasoning.
- (B) Those who performed best in the experiment experienced more satisfaction when working with abstract patterns than did those who performed less well.
- (C) People who are better at abstract pattern recognition have more energy-efficient neural connections.
- (D) The energy expenditure of the subjects' brains increases when a design that completes the initially recognized pattern is determined.
- (E) The task of completing a given design is more capably performed by athletes, whose energy expenditure is lower when they are at rest than is that of the general population.

12. A researcher studying drug addicts found that, on average, they tend to manipulate other people a great deal more than nonaddicts do. The researcher concluded that people who frequently manipulate other people are likely to become addicts.

Which of the following, if true, most seriously weakens the researcher's conclusion?

- (A) After becoming addicted to drugs, drug addicts learn to manipulate other people as a way of obtaining drugs.

- (B) When they are imprisoned, drug addicts often use their ability to manipulate other people to obtain better living conditions.
- (C) Some nonaddicts manipulate other people more than some addicts do.
- (D) People who are likely to become addicts exhibit unusual behavior patterns other than frequent manipulation of other people
- (E) The addicts that the researcher studied were often unsuccessful in obtaining what they wanted when they manipulated other people.
13. One way to judge the performance of a company is to compare it with other companies. This technique, commonly called "benchmarking," permits the manager of a company to discover better industrial practices and can provide a justification for the adoption of good practices.
- Any of the following, if true, is a valid reason for benchmarking the performance of a company against companies with which it is not in competition rather than against competitors EXCEPT:
- (A) Comparisons with competitors are most likely to focus on practices that the manager making the comparisons already employs.
- (B) Getting "inside" information about the unique practices of competitors is particularly difficult.
- (C) Since companies that compete with each other are likely to have comparable levels of efficiency, only benchmarking against noncompetitors is likely to reveal practices that would aid in beating competitors.
- (D) Managers are generally more receptive to new ideas that they find outside their own industry.
- (E) Much of the success of good companies is due to their adoption of practices that take advantage of the special circumstances of their products or markets.
14. Among the more effective kinds of publicity that publishers can get for a new book is to have excerpts of it published in a high-circulation magazine soon before the book is published. The benefits of such excerpting include not only a sure increase in sales but also a fee paid by the magazine to the book's publisher.
- Which of the following conclusions is best supported by the information above?
- (A) The number of people for whom seeing an excerpt of a book in a magazine provides an adequate substitute for reading the whole book is smaller than the number for whom the excerpt stimulates a desire to read the book.
- (B) Because the financial advantage of excerpting a new book in a magazine usually accrues to the book's publisher, magazine editors are unwilling to publish excerpts from new books.
- (C) In calculating the total number of copies that a book has sold, publishers include sales of copies of magazines that featured an excerpt of the book.
- (D) The effectiveness of having excerpts of a book published in a magazine, measured in terms of increased sales of a book, is proportional to the circulation of the magazine in which the excerpts are published.
- (E) Books that are suitable for excerpting in high-circulation magazines sell more copies than books that are not suitable for excerpting.
15. In Swartkans territory, archaeologists discovered charred bone fragments dating back 1 million years. Analysis of the fragments, which came from a variety of animals, showed that they had been heated to temperatures no higher than those produced in experimental campfires made from branches of white stinkwood, the most common tree around Swartkans.
- Which of the following, if true, would, together with the information above, provide the best basis for the claim that the charred bone fragments are evidence of the use of fire by early hominids?
- (A) The white stinkwood tree is used for building material by the present-day inhabitants of Swartkans.
- (B) Forest fires can heat wood to a range of temperatures that occur in campfires.
- (C) The bone fragments were fitted together by the archaeologists to form the complete skeletons of several animals.

- (D) Apart from the Swartkans discovery, there is reliable evidence that early hominids used fire as many as 500 thousand years ago.
- (E) The bone fragments were found in several distinct layers of limestone that contained primitive cutting tools known to have been used by early hominids.

16. For a trade embargo against a particular country to succeed, a high degree of both international accord and ability to prevent goods from entering or leaving that country must be sustained. A total blockade of Patria's ports is necessary to an embargo, but such an action would be likely to cause international discord over the embargo.

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

- (A) The balance of opinion is likely to favor Patria in the event of a blockade.
- (B) As long as international opinion is unanimously against Patria, a trade embargo is likely to succeed.
- (C) A naval blockade of Patria's ports would ensure that no goods enter or leave Patria.
- (D) Any trade embargo against Patria would be likely to fail at some time.
- (E) For a blockade of Patria's ports to be successful, international opinion must be unanimous.

### CRITICAL REASONING TEST SECTION 14

25 Minutes 16 Questions

1. The local board of education found that, because the current physics curriculum has little direct relevance to today's world, physics classes attracted few high school students. So to attract students to physics classes, the board proposed a curriculum that emphasizes principles of physics involved in producing and analyzing visual images.

Which of the following, if true, provides the strongest reason to expect that the proposed curriculum will be successful in attracting students?

- (A) Several of the fundamental principles of physics are involved in producing and analyzing visual images.
- (B) Knowledge of physics is becoming increasingly important in understanding the technology used in today's world.
- (C) Equipment that a large producer of photographic equipment has donated to the high school could be used in the proposed curriculum.
- (D) The number of students interested in physics today is much lower than the number of students interested in physics 50 years ago.
- (E) In today's world the production and analysis of visual images is of major importance in communications, business, and recreation.

2. Many companies now have employee assistance programs that enable employees, free of charge, to improve their physical fitness, reduce stress, and learn ways to stop smoking. These programs increase worker productivity, reduce absenteeism, and lessen insurance costs for employee health care. Therefore, these programs benefit the company as well as the employee.

Which of the following, if true, most significantly strengthens the conclusion above?

- (A) Physical fitness programs are often the most popular services offered to employees.
  - (B) Studies have shown that training in stress management is not effective for many people.
  - (C) Regular exercise reduces people's risk of heart disease and provides them with increased energy.
  - (D) Physical injuries sometimes result from entering a strenuous physical fitness program too quickly.
  - (E) Employee assistance programs require companies to hire people to supervise the various programs offered.
3. Unlike the wholesale price of raw wool, the wholesale price of raw cotton has fallen considerably in the last year. Thus, although the retail price of cotton clothing at retail clothing stores has not yet fallen, it will inevitably fall.



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

- (A) The cost of processing raw cotton for cloth has increased during the last year.
- (B) The wholesale price of raw wool is typically higher than that of the same volume of raw cotton.
- (C) The operating costs of the average retail clothing store have remained constant during the last year.
- (D) Changes in retail prices always lag behind changes in wholesale prices.
- (E) The cost of harvesting raw cotton has increased in the last year.

4. Small-business groups are lobbying to defeat proposed federal legislation that would substantially raise the federal minimum wage. This opposition is surprising since the legislation they oppose would, for the first time, exempt all small businesses from paying any minimum wage.

Which of the following, if true, would best explain the opposition of small-business groups to the proposed legislation?

- (A) Under the current federal minimum-wage law, most small businesses are required to pay no less than the minimum wage to their employees.
  - (B) In order to attract workers, small companies must match the wages offered by their larger competitors, and these competitors would not be exempt under the proposed laws.
  - (C) The exact number of companies that are currently required to pay no less than the minimum wage but that would be exempt under the proposed laws is unknown.
  - (D) Some states have set their own minimum wages---in some cases, quite a bit above the level of the minimum wage mandated by current federal law---for certain key industries.
  - (E) Service companies make up the majority of small businesses and they generally employ more employees per dollar of revenues than do retail or manufacturing businesses.
5. Reviewer: The book *Art's Decline* argues that European painters today lack skills that were common among European painters of preceding centuries. In this the book must be right, since its analysis of 100 paintings, 50 old and 50 contemporary, demonstrates convincingly that none of the contemporary paintings are executed as skillfully as the older paintings.

Which of the following points to the most serious logical flaw in the reviewer's argument?

- (A) The paintings chosen by the book's author for analysis could be those that most support the book's thesis.
  - (B) There could be criteria other than the technical skill of the artist by which to evaluate a painting.
  - (C) The title of the book could cause readers to accept the book's thesis even before they read the analysis of the paintings that supports it.
  - (D) The particular methods currently used by European painters could require less artistic skill than do methods used by painters in other parts of the world.
  - (E) A reader who was not familiar with the language of art criticism might not be convinced by the book's analysis of the 100 paintings.
6. The pharmaceutical industry argues that because new drugs will not be developed unless heavy development costs can be recouped in later sales, the current 20 years of protection provided by patents should be extended in the case of newly developed drugs. However, in other industries new-product development continues despite high development costs, a fact that indicates that the extension is unnecessary.

Which of the following, if true, most strongly supports the pharmaceutical industry's argument against the challenge made above?

- (A) No industries other than the pharmaceutical industry have asked for an extension of the 20-year limit on patent protection.
- (B) Clinical trials of new drugs, which occur after the patent is granted and before the new drug can be marketed, often now take as long as 10 years to complete.
- (C) There are several industries in which the ratio of research and development costs to revenues is higher than it is in the pharmaceutical industry.

- (D) An existing patent for a drug does not legally prevent pharmaceutical companies from bringing to market alternative drugs, provided they are sufficiently dissimilar to the patented drug.
- (E) Much recent industrial innovation has occurred in products---for example, in the computer and electronics industries---for which patent protection is often very ineffective.

Questions 7-8 are based on the following.

Bank depositors in the United States are all financially protected against bank failure because the government insures all individuals' bank deposits. An economist argues that this insurance is partly responsible for the high rate of bank failures, since it removes from depositors any financial incentive to find out whether the bank that holds their money is secure against failure. If depositors were more selective, then banks would need to be secure in order to compete for depositors' money.

7. The economist's argument makes which of the following assumptions?

- (A) Bank failures are caused when big borrowers default on loan repayments.
- (B) A significant proportion of depositors maintain accounts at several different banks.
- (C) The more a depositor has to deposit, the more careful he or she tends to be in selecting a bank.
- (D) The difference in the interest rates paid to depositors by different banks is not a significant

factor in bank failures.

- (E) Potential depositors are able to determine which banks are secure against failure.

8. Which of the following, if true, most seriously weakens the economist's argument?

- (A) Before the government started to insure depositors against bank failure, there was a lower rate of bank failure than there is now.
- (B) When the government did not insure deposits, frequent bank failures occurred as a result of depositors' fears of losing money in bank failures.
- (C) Surveys show that a significant proportion of depositors are aware that their deposits are insured by the government.

- (D) There is an upper limit on the amount of an individual's deposit that the government will insure, but very few individuals' deposits exceed this limit.

- (E) The security of a bank against failure depends on the percentage of its assets that are loaned out and also on how much risk its loans involve.

9. Passengers must exit airplanes swiftly after accidents, since gases released following accidents are toxic to humans and often explode soon after being released. In order to prevent passenger deaths from gas inhalation, safety officials recommend that passengers be provided with smoke hoods that prevent inhalation of the gases.

Which of the following, if true, constitutes the strongest reason not to require implementation of the safety officials' recommendation?

- (A) Test evacuations showed that putting on the smoke hoods added considerably to the overall time it took passengers to leave the cabin.
- (B) Some airlines are unwilling to buy the smoke hoods because they consider them to be prohibitively expensive.
- (C) Although the smoke hoods protect passengers from the toxic gases, they can do nothing to prevent the gases from igniting.
- (D) Some experienced flyers fail to pay attention to the safety instructions given on every commercial flight before takeoff.
- (E) In many airplane accidents, passengers who were able to reach emergency exits were

overcome by toxic gases before they could exit the airplane.

10. In 1960, 10 percent of every dollar paid in automobile insurance premiums went to pay costs arising from injuries incurred in car accidents. In 1990, 50 percent of every dollar paid in automobile insurance premiums went toward such costs, despite the fact that cars were much safer in 1990 than in 1960.

Which of the following, if true, best explains the discrepancy outlined above?

- (A) There were fewer accidents in 1990 than in 1960.
- (B) On average, people drove more slowly in 1990 than in 1960.
- (C) Cars grew increasingly more expensive to repair over the period in question.
- (D) The price of insurance increased more rapidly than the rate of inflation between 1960 and 1990.
- (E) Health-care costs rose sharply between 1960 and 1990.

11. Caterpillars of all species produce an identical hormone called "juvenile hormone" that maintains feeding behavior. Only when a caterpillar has grown to the right size for pupation to take place does a special enzyme halt the production of juvenile hormone. This enzyme can be synthesized and will, on being ingested by immature caterpillars, kill them by stopping them from feeding.

Which of the following, if true, most strongly supports the view that it would not be advisable to try to eradicate agricultural pests that go through a caterpillar stage by spraying croplands with the enzyme mentioned above?

- (A) Most species of caterpillar are subject to some natural predation.
- (B) Many agricultural pests do not go through a caterpillar stage.
- (C) Many agriculturally beneficial insects go through a caterpillar stage.
- (D) Since caterpillars of different species emerge at different times, several sprayings would be necessary.
- (E) Although the enzyme has been synthesized in the laboratory, no large-scale production facilities exist as yet.

12. Although aspirin has been proven to eliminate moderate fever associated with some illnesses, many doctors no longer routinely recommend its use for this purpose. A moderate fever stimulates the activity of the body's disease-fighting white blood cells and also inhibits the growth of many strains of disease-causing bacteria.

If the statements above are true, which of the following conclusions is most strongly supported by them?

- (A) Aspirin, an effective painkiller, alleviates the pain and discomfort of many illnesses.
- (B) Aspirin can prolong a patient's illness by eliminating moderate fever helpful in fighting some diseases.
- (C) Aspirin inhibits the growth of white blood cells, which are necessary for fighting some illnesses.
- (D) The more white blood cells a patient's body produces, the less severe the patient's illness will be.
- (E) The focus of modern medicine is on inhibiting the growth of disease-causing bacteria within the body.

13. Because postage rates are rising, Home Decorator magazine plans to maximize its profits by reducing by one half the number of issues it publishes each year.

The quality of articles, the number of articles published per year, and the subscription price will not change. Market research shows that neither subscribers nor advertisers will be lost if the magazine's plan is instituted.

Which of the following, if true, provides the strongest evidence that the magazine's profits are likely to decline if the plan is instituted?

- (A) With the new postage rates, a typical issue under the proposed plan would cost about one-third more to mail than a typical current issue would.
  - (B) The majority of the magazine's subscribers are less concerned about a possible reduction in the quantity of the magazine's articles than about a possible loss of the current high quality of its articles.
  - (C) Many of the magazine's long-time subscribers would continue their subscriptions even if the subscription price were increased.
  - (D) Most of the advertisers that purchase advertising space in the magazine will continue to spend the same amount on advertising per issue as they have in the past.
  - (E) Production costs for the magazine are expected to remain stable.
14. A study of marital relationships in which one partner's sleeping and waking cycles differ from those of the other partner reveals that such couples share fewer activities with each other and have more violent arguments than do couples in a relationship in which both partners follow the same sleeping and waking patterns. Thus, mismatched sleeping and waking cycles can seriously jeopardize a marriage.

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

- (A) Married couples in which both spouses follow the same sleeping and waking patterns also occasionally have arguments that can jeopardize the couple's marriage.
- (B) The sleeping and waking cycles of individuals tend to vary from season to season.
- (C) The individuals who have sleeping and waking cycles that differ significantly from those of their spouses tend to argue little with colleagues at work.
- (D) People in unhappy marriages have been found to express hostility by adopting a different sleeping and waking cycle from that of their spouses.
- (E) According to a recent study, most people's sleeping and waking cycles can be controlled and modified easily.

Questions 15-16 are based on the following.

Roland: The alarming fact is that 90 percent of the people in this country now report that they know someone who is unemployed.

Sharon: But a normal, moderate level of unemployment is 5 percent, with 1 out of 20 workers unemployed. So at any given time if a person knows approximately 50 workers, 1 or more will very likely be unemployed.

15. Sharon's argument is structured to lead to which of the following as a conclusion?

- (A) The fact that 90% of the people know someone who is unemployed is not an indication that unemployment is abnormally high.
- (B) The current level of unemployment is not moderate.
- (C) If at least 5% of workers are unemployed, the result of questioning a representative group of people cannot be the percentage Roland cites.
- (D) It is unlikely that the people whose statements Roland cites are giving accurate reports.
- (E) If an unemployment figure is given as a certain percent, the actual percentage of those without jobs is even higher.

16. Sharon's argument relies on the assumption that

- (A) normal levels of unemployment are rarely exceeded

- (B) unemployment is not normally concentrated in geographically isolated segments of the population
- (C) the number of people who each know someone who is unemployed is always higher than 90% of the population
- (D) Roland is not consciously distorting the statistics he presents
- (E) knowledge that a personal acquaintance is unemployed generates more fear of losing one's job than does knowledge of unemployment statistics

### CRITICAL REASONING TEST SECTION 15

25 Minutes 16 Questions

1. A company is considering changing its policy concerning daily working hours. Currently, this company requires all employees to arrive at work at 8 a.m. The proposed policy would permit each employee to decide when to arrive—from as early as 6 a.m. to as late as 11 a.m.

The adoption of this policy would be most likely to decrease employees' productivity if the employees' job functions required them to

- (A) work without interruption from other employees
- (B) consult at least once a day with employees from other companies
- (C) submit their work for a supervisor's eventual approval
- (D) interact frequently with each other throughout the entire workday
- (E) undertake projects that take several days to complete

2. The amount of time it takes for most of a worker's occupational knowledge and skills to become obsolete has been declining because of the introduction of advanced manufacturing technology (AMT). Given the rate at which AMT is currently being introduced in manufacturing, the average worker's old skills become obsolete and new skills are required within as little as five years.

Which of the following plans, if feasible, would allow a company to prepare most effectively for the rapid obsolescence of skills described above?

- (A) The company will develop a program to offer selected employees the opportunity to receive training six years after they were originally hired.
- (B) The company will increase its investment in AMT every year for a period of at least five years.
- (C) The company will periodically survey its employees to determine how the introduction of AMT has affected them.
- (D) Before the introduction of AMT, the company will institute an educational program to inform its employees of the probable consequences of the introduction of AMT.
- (E) The company will ensure that it can offer its employees any training necessary for meeting their job requirements.

3. Installing scrubbers in smokestacks and switching to cleaner-burning fuel are the two methods available to Northern Power for reducing harmful emissions from its plants. Scrubbers will reduce harmful emissions more than cleaner-burning fuels will. Therefore, by installing scrubbers, Northern Power will be doing the most that can be done to reduce harmful emissions from its plants.

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

- A. Switching to cleaner-burning fuel will not be more expensive than installing scrubbers.
- B. Northern Power can choose from among various kinds of scrubbers, some of which are more effective than others.
- C. Northern Power is not necessarily committed to reducing harmful emissions from its plants.
- D. Harmful emissions from Northern Power's plants cannot be reduced more by using both methods together than by the installation of scrubbers alone.
- E. Aside from harmful emissions from the smoke-stacks of its plants, the activities of Northern Power do not cause significant air pollution.

4. Some anthropologists study modern-day societies of foragers in an effort to learn about our ancient ancestors who were also foragers. A flaw in this strategy is that forager societies are extremely varied. Indeed, any forager society with which anthropologists are familiar has had considerable contact with modern nonforager societies.

Which of the following, if true, would most weaken the criticism made above of the anthropologists' strategy?

- A. All forager societies throughout history have had a number of important features in common that are absent from other types of societies.
- B. Most ancient forager societies either dissolved or made a transition to another way of life.
- C. All anthropologists study one kind or another of modern-day society.
- D. Many anthropologists who study modern-day forager societies do not draw inferences about ancient societies on the basis of their studies.
- E. Even those modern-day forager societies that have not had significant contact with modern societies are importantly different from ancient forager societies.

5.

Mayor: In each of the past five years, the city has cut school funding and each time school officials complained that the cuts would force them to reduce expenditures for essential services. But each time, only expenditures for nonessential services were actually reduced. So school officials can implement further cuts without reducing any expenditures for essential services.

Which of the following, if true, most strongly supports the mayor's conclusion?

- A. The city's schools have always provided essential services as efficiently as they have provided nonessential services.
- B. Sufficient funds are currently available to allow the city's schools to provide some nonessential services.
- C. Price estimates quoted to the city's schools for the provision of nonessential services have not increased substantially since the most recent school funding cut.
- D. Few influential city administrators support the funding of costly nonessential services in the city's schools.
- E. The city's school officials rarely exaggerate the potential impact of threatened funding cuts.

6. Advertisement:

For sinus pain, three out of four hospitals give their patients Novex. So when you want the most effective painkiller for sinus pain, Novex is the one to choose.

Which of the following, if true, most seriously undermines the advertisement's argument?

- A. Some competing brands of painkillers are intended to reduce other kinds of pain in addition to sinus pain.
- B. Many hospitals that do not usually use Novex will do so for those patients who cannot tolerate the drug the hospitals usually use.
- C. Many drug manufacturers increase sales of their products to hospitals by selling these products to the hospitals at the lowest price the manufacturers can afford.
- D. Unlike some competing brands of painkillers, Novex is available from pharmacies without a doctor's prescription.
- E. In clinical trials Novex has been found more effective than competing brands of painkillers that have been on the market longer than Novex.

7. A report that many apples contain a cancer-causing preservative called Alar apparently had little effect on consumers. Few consumers planned to change their apple-buying habits as a result of the report. Nonetheless, sales of apples in grocery stores fell sharply in March, a month after the report was issued.

Which of the following, if true, best explains the reason for the apparent discrepancy described above?

- A. In March, many grocers removed apples from their shelves in order to demonstrate concern about their customers' health.
- B. Because of a growing number of food-safety warnings, consumers in March were indifferent to such warnings.
- C. The report was delivered on television and also appeared in newspapers.
- D. The report did not mention that any other fruit contains Alar, although the preservative is used on other fruit.
- E. Public health officials did not believe that apples posed a health threat because only minute traces of Alar were present in affected apples.

8. A new law gives ownership of patents—documents providing exclusive right to make and sell an invention—to universities, not the government, when those patents result from government-sponsored university research. Administrators at Logos University plan to sell any patents they acquire to corporations in order to fund programs to improve undergraduate teaching.

Which of the following, if true, would cast most doubt on the viability of the college administrators' plan described above?

- A. Profit-making corporations interested in developing products based on patents held by universities are likely to try to serve as exclusive sponsors of ongoing university research projects.
- B. Corporate sponsors of research in university facilities are entitled to tax credits under new federal tax-code guidelines.

- C. Research scientists at Logos University have few or no teaching responsibilities and participate little if at all in the undergraduate programs in their field.
- D. Government-sponsored research conducted at Logos University for the most part duplicates research already completed by several profit-making corporations.
- E. Logos University is unlikely to attract corporate sponsorship of its scientific research.

9. Contrary to earlier predictions, demand for sugarcane has not increased in recent years. Yet, even though prices and production amounts have also been stable during the last three years, sugarcane growers last year increased their profits by more than ten percent over the previous year's level.

Any of the following statements, if true about last year, helps to explain the rise in profits EXCEPT:

- A. Many countries that are large consumers of sugarcane increased their production of sugarcane-based ethanol, yet their overall consumption of sugarcane decreased.
- B. Sugarcane growers have saved money on wages by switching from paying laborers an hourly wage to paying them by the amount harvested.
- C. The price of oil, the major energy source used by sugarcane growers in harvesting their crops, dropped by over twenty percent.
- D. Many small sugarcane growers joined together to form an association of sugarcane producers and began to buy supplies at low group rates.
- E. Rainfall in sugarcane-growing regions was higher than it had been during the previous year, allowing the growers to save money on expensive artificial irrigation.

10. If the county continues to collect residential trash at current levels, landfills will soon be overflowing and parkland will need to be used in order to create more space. Charging each household a fee for each pound of trash it puts out for collection will induce residents to reduce the amount of trash they create; this charge will therefore protect the remaining county parkland.

Which of the following is an assumption made in drawing the conclusion above?

- A. Residents will reduce the amount of trash they put out for collection by reducing the number of products they buy.
- B. The collection fee will not significantly affect the purchasing power of most residents, even if their households do not reduce the amount of trash they put out.
- C. The collection fee will not induce residents to dump their trash in the parklands illegally.
- D. The beauty of county parkland is an important issue for most of the county's residents.
- E. Landfills outside the county's borders could be used as dumping sites for the county's trash.

Questions 11-12 are based on the following.

Environmentalist: The commissioner of the Fish and Game Authority would have the public believe that increases in the number of marine fish caught demonstrate that this resource is no longer endangered. This is a specious argument, as unsound as it would be to assert that the ever-increasing rate at which rain forests are being cut down demonstrates a lack of danger to that resource. The real cause of the increased fish catch is a greater efficiency in using technologies that deplete resources.

11. Which of the following strategies is used in the presentation of the environmentalist's position?

- (A) Questioning the motives of an opponent
- (B) Showing that an opposing position is self-contradictory
- (C) Attacking an argument through the use of an analogy
- (D) Demonstrating the inaccuracy of certain data
- (E) Pointing out adverse consequences of a proposal

12. The environmentalist's statements, if true, best support which of the following as a conclusion?

- A. The use of technology is the reason for the increasing encroachment of people on nature.
- B. It is possible to determine how many fish are in the sea in some way other than by catching fish.
- C. The proportion of marine fish that are caught is as high as the proportion of rain-forest trees that are cut down each year.



- D. Modern technologies waste resources by catching inedible fish.
- E. Marine fish continue to be an endangered resource.

13. Biometric access-control systems—those using fingerprints, voiceprints, etc., to regulate admittance to restricted areas—work by degrees of similarity, not by identity. After all, even the same finger will rarely leave exactly identical prints. Such systems can be adjusted to minimize refusals of access to legitimate access-seekers. Such adjustments, however, increase the likelihood of admitting impostors.

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

- A. If a biometric access-control system were made to work by identity, it would not produce any correct admittance decisions.
- B. If a biometric access-control system reliably prevents impostors from being admitted, it will sometimes turn away legitimate access-seekers.
- C. Biometric access-control systems are appropriate only in situations in which admittance of impostors is less of a problem than is mistaken refusal of access.
- D. Nonbiometric access-control systems—based, for example, on numerical codes—are less likely than biometric ones to admit impostors.
- E. Anyone choosing an access-control system should base the choice solely on the ratio of false refusals to false admittances.

14. Although computers can enhance people's ability to communicate, computer games are a cause of underdeveloped communication skills in children. After-school hours spent playing computer games are hours not spent talking with people. Therefore, children who spend all their spare time playing these games have less experience in interpersonal communication than other children have.

The argument depends on which of the following assumptions?

- A. Passive activities such as watching television and listening to music do not hinder the development of communication skills in children.
- B. Most children have other opportunities, in addition to after-school hours, in which they can choose whether to play computer games or to interact with other people.
- C. Children who do not spend all of their after-school hours playing computer games spend at least some of that time talking with other people.
- D. Formal instruction contributes little or nothing to children's acquisition of communication skills.
- E. The mental skills developed through playing computer games do not contribute significantly to children's intellectual development.

15. One variety of partially biodegradable plastic beverage container is manufactured from small bits of plastic bound together by a degradable bonding agent such as cornstarch. Since only the bonding agent degrades, leaving the small bits of plastic, no less plastic refuse per container is produced when such containers are discarded than when comparable nonbiodegradable containers are discarded.

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

- A. Both partially biodegradable and nonbiodegradable plastic beverage containers can be crushed completely flat by refuse compactors.
- B. The partially biodegradable plastic beverage containers are made with more plastic than comparable nonbiodegradable ones in order to compensate for the weakening effect of the bonding agents.
- C. Many consumers are ecology-minded and prefer to buy a product sold in the partially biodegradable plastic beverage containers rather than in nonbiodegradable containers, even if the price is higher.
- D. The manufacturing process for the partially biodegradable plastic beverage containers results in less plastic waste than the manufacturing process for nonbiodegradable plastic beverage containers.
- E. Technological problems with recycling currently prevent the reuse as food or beverage containers of the plastic from either type of plastic beverage container.

16. Commentator: The theory of trade retaliation states that countries closed out of any of another country's markets should close some of their own markets to the other country in order to pressure the other country to reopen its markets. If every country acted according to this theory, no country would trade with any other.

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

- A. No country actually acts according to the theory of trade retaliation.
- B. No country should block any of its markets to foreign trade.
- C. Trade disputes should be settled by international tribunal.
- D. For any two countries, at least one has some market closed to the other.
- E. Countries close their markets to foreigners to protect domestic producers.

### CRITICAL REASONING TEST SECTION 16

25 Minutes 16 Questions

1. The chanterelle, a type of wild mushroom, grows beneath host trees such as the Douglas fir, which provide it with necessary sugars. The underground filaments of chanterelles, which extract the sugars, in turn provide nutrients and water for their hosts. Because of this mutually beneficial relationship, harvesting the chanterelles growing beneath a Douglas fir seriously endangers the tree.

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

- A. The number of wild mushrooms harvested has increased in recent years.
- B. Chanterelles grow not only beneath Douglas firs but also beneath other host trees.
- C. Many types of wild mushrooms are found only in forests and cannot easily be grown elsewhere.
- D. The harvesting of wild mushrooms stimulates future growth of those mushrooms.
- E. Young Douglas fir seedlings die without the nutrients and water provided by chanterelle filaments.

2. The reason much refrigerated food spoils is that it ends up out of sight at the back of the shelf. So why not have round shelves that rotate? Because such rotating shelves would have just the same sort of drawback, since things would fall off the shelves' edges into the rear corners.

Which of the following is presupposed in the argument against introducing rotating shelves?

- A. Refrigerators would not be made so that their interior space is cylindrical.
- B. Refrigerators would not be made to have a window in front for easy viewing of their contents without opening the door.
- C. The problem of spoilage of refrigerated food is not amenable to any solution based on design changes.
- D. Refrigerators are so well designed that there are bound to be drawbacks to any design change.
- E. Rotating shelves would be designed to rotate only while the refrigerator door was open.

3. It would cost Rosetown one million dollars to repair all of its roads. In the year after completion of those repairs, however, Rosetown would thereby avoid incurring three million dollars worth of damages, since currently Rosetown pays that amount annually in compensation for damage done to cars each year by its unrepaired roads.

Which of the following, if true, gives the strongest support to the argument above?

- A. Communities bordering on Rosetown also pay compensation for damage done to cars by their unrepaired roads.
- B. After any Rosetown road has been repaired, several years will elapse before that road begins to damage cars.
- C. Rosetown would need to raise additional taxes if it were to spend one million dollars in one year on road repairs.
- D. The degree of damage caused to Rosetown's roads by harsh weather can vary widely from year to year.
- E. Trucks cause much of the wear on Rosetown's roads, but owners of cars file almost all of the claims for compensation for damage caused by unrepaired roads.

4. Two experimental garden plots were each planted with the same number of tomato plants. agnesium salts were added to the first plot but not to the second. The first plot produced 20 pounds of tomatoes and the second plot produced 10 pounds. Since nothing else but water was added to either plot, the higher yields in the first plot must have been due to the magnesium salts.

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

- (A) A small amount of the magnesium salts from the first plot leached into the second plot.
- (B) Tomato plants in a third experimental plot, to which a high-nitrogen fertilizer was added,

but no magnesium salts, produced 15 pounds of tomatoes.

- (C) Four different types of tomatoes were grown in equal proportions in each of the plots.
- (D) Some weeds that compete with tomatoes cannot tolerate high amounts of magnesium salts in the soil.
- (E) The two experimental plots differed from each other with respect to soil texture and exposure to sunlight.

5. Archaeologists have found wheeled ceramic toys made by the Toltec, twelfth-century inhabitants of what is now Veracruz. Although there is no archaeological evidence that the Toltec used wheels for anything but toys, some anthropologists hypothesize that wheeled utility vehicles were used to carry materials needed for the monumental structures the Toltec produced.

Which of the following, if true, would most help the anthropologists explain the lack of evidence noted above?

- (A) The Toltec sometimes incorporated into their toys representations of utensils or other devices that served some practical purpose.
- (B) Any wheeled utility vehicles used by the Toltec could have been made entirely of wood, and unlike ceramic, wood decays rapidly in the humid climate of Veracruz.
- (C) Carvings in monument walls suggest that the Toltec's wheeled ceramic toys sometimes had ritual uses in addition to being used by both children and adults as decorations and playthings.
- (D) Wheeled utility vehicles were used during the twelfth century in many areas of the world, but during this time wheeled toys were not very common in areas outside Veracruz.
- (E) Some of the wheeled ceramic toys were found near the remains of monumental structures.

6. Demographers doing research for an international economics newsletter claim that the average per capita income in the country of Kuptala is substantially lower than that in the country of Bahlton. They also claim, however, that whereas poverty is relatively rare in Kuptala, over half the population of Bahlton lives in extreme poverty. At least one of the demographers' claims must, therefore, be wrong.

The argument above is most vulnerable to which of the following criticisms?

- (A) It rejects an empirical claim about the average per capita incomes in the two countries without making any attempt to discredit that claim by offering additional economic evidence.
  - (B) It treats the vague term "poverty" as though it had a precise and universally accepted meaning.
  - (C) It overlooks the possibility that the number of people in the two countries who live in poverty could be the same even though the percentages of the two populations that live in poverty differ markedly.
  - (D) It fails to show that wealth and poverty have the same social significance in Kuptala as in Bahlton.
  - (E) It does not consider the possibility that incomes in Kuptala, unlike those in Bahlton, might all be very close to the country's average per capita income.
7. Normally, increases in the price of a product decrease its sales except when the price increase accompanies an improvement in the product. Wine is unusual, however. Often increases in the price of a particular producer's wine will result in increased sales, even when the wine itself is unchanged.

Which of the following, if true, does most to explain the anomaly described above?

- (A) The retail wine market is characterized by an extremely wide range of competing products.
- (B) Many consumers make decisions about which wines to purchase on the basis of reviews of wine published in books and periodicals.
- (C) Consumers selecting wine in a store often use the price charged as their main guide to the wine's quality.
- (D) Wine retailers and producers can generally increase the sales of a particular wine temporarily by introducing a price discount.
- (E) Consumers who purchase wine regularly generally have strong opinions about which wines they prefer.

8. The recent decline in land prices has hurt many institutions that had invested heavily in real estate. Last year, before the decline began, a local college added 2,000 acres to its holdings. The college, however, did not purchase the land but received it as a gift. Therefore the price decline

will probably not affect the college.

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

- (A) The 2,000 acres that the college was given last year are located within the same community as the college itself.
- (B) The college usually receives more contributions of money than of real estate.
- (C) Land prices in the region in which the college is located are currently higher than the national average.
- (D) Last year, the amount that the college allocated to pay for renovations included money it expected to receive by selling some of its land this year.
- (E) Last year, the college paid no property taxes on land occupied by college buildings but instead paid fees to compensate the local government for services provided.

9. Civil trials often involve great complexities that are beyond the capacities of jurors to understand. As a result, jurors' decisions in such trials are frequently incorrect. Justice would therefore be better served if the more complex trials were decided by judges rather than juries.

The argument above depends on which of the following assumptions?

- (A) A majority of civil trials involve complexities that jurors are not capable of understanding.
- (B) The judges who would decide complex civil trials would be better able to understand the complexities of those trials than jurors are.
- (C) The judges who would preside over civil trials would disallow the most complex sorts of evidence from being introduced into those trials.
- (D) Jurors' decisions are frequently incorrect even in those civil trials that do not involve great complexities.
- (E) The sole reason in favor of having juries decide civil trials is the supposition that their decisions will almost always be correct.

10. Some species of dolphins find their prey by echolocation; they emit clicking sounds and listen for echoes returning from distant objects in the water. Marine biologists have speculated that those same clicking sounds might have a second function: particularly loud clicks might be used by the dolphins to stun their prey at close range through sensory overload.

Which of the following, if discovered to be true, would cast the most serious doubt on the correctness of the speculation described above?

- (A) Dolphins that use echolocation to locate distant prey also emit frequent clicks at intermediate distances as they close in on their prey.
- (B) The usefulness of echolocation as a means of locating prey depends on the clicking sounds being of a type that the prey is incapable of perceiving, regardless of volume.
- (C) If dolphins stun their prey, the effect is bound to be so temporary that stunning from far away, even if possible, would be ineffective.
- (D) Echolocation appears to give dolphins that use it information about the richness of a source of food as well as about its direction.
- (E) The more distant a dolphin's prey, the louder the echolocation clicks must be if they are to reveal the prey's presence to the hunting dolphin.

11. Advertisement:

The world's best coffee beans come from Colombia. The more Colombian beans in a blend of coffee, the better the blend, and no company purchases more Colombian beans than Kreemo Coffee, Inc. So it only stands to reason that if you buy a can of Kreemo's coffee, you're buying the best blended coffee available today.

The reasoning of the argument in the advertisement is flawed because it overlooks the possibility that

- (A) the equipment used by Kreemo to blend and package its coffee is no different from that used by most other coffee producers
- (B) not all of Kreemo's competitors use Colombian coffee beans in the blends of coffee they sell
- (C) Kreemo sells more coffee than does any other company
- (D) Kreemo's coffee is the most expensive blended coffee available today
- (E) the best unblended coffee is better than the best blended coffee

12. The only purpose for which a particular type of tape is needed is to hold certain surgical wounds closed for ten days—the maximum time such wounds need tape. Newtape is a new brand of this type of tape.

Newtape's salespeople claim that Newtape will improve healing because Newtape adheres twice as long as the currently used tape does.

Which of the following statements, if true, would most seriously call into question the claim made by Newtape's salespeople?

- (A) Most surgical wounds take about ten days to heal.
  - (B) Most surgical tape is purchased by hospitals and clinics rather than by individual surgeons.
  - (C) The currently used tape's adhesiveness is more than sufficient to hold wounds closed for ten days.
  - (D) Neither Newtape nor the currently used tape adheres well to skin that has not been cleaned.
  - (E) Newtape's adhesion to skin that has been coated with a special chemical preparation is only half as good as the currently used tape's adhesion to such coated skin.
13. A severe drought can actually lessen the total amount of government aid that United States farmers receive as a group. The government pays farmers the amount, if any, by which the market price at which crops are actually sold falls short of a preset target price per bushel for the crops. The drought of 1983, for example, caused farm-program payments to drop by \$10 billion.

Given the information above, which of the following, if true, best explains why the drought of 1983 resulted in a reduction in farm-program payments?

- (A) Prior to the drought of 1983, the government raised the target price for crops in order to aid farmers in reducing their debt loads.
  - (B) Due to the drought of 1983, United States farmers exported less food in 1983 than in the preceding year.
  - (C) Due to the drought of 1983, United States farmers had smaller harvests and thus received a higher market price for the 1983 crop than for the larger crop of the preceding year.
  - (D) Due to the drought of 1983, United States farmers planned to plant smaller crops in 1984 than they had in 1983.
  - (E) Despite the drought of 1983, retail prices for food did not increase significantly between 1982 and 1983.
14. In order to increase revenues, an airport plans to change the parking fees it charges at its hourly parking lots. Rather than charging \$2.00 for the first two-hour period, or part thereof, and \$1.00 for each hour thereafter, the airport will charge \$4.00 for the first four-hour period, or part thereof, and \$1.00 for each hour thereafter.

Which of the following is a consideration that, if true, suggests that the plan will be successful in increasing revenues?

- (A) Very few people who park their cars at the hourly parking lot at the airport leave their cars for more than two hours at a time.
  - (B) Over the past several years, the cost to the airport of operating its hourly parking facilities has been greater than the revenues it has received from them.
  - (C) People who leave their cars at the airport while on a trip generally park their cars in lots that charge by the day rather than by the hour.
  - (D) A significant portion of the money spent to operate the airport parking lot is spent to maintain the facilities rather than to pay the salaries of the personnel who collect the parking fees.
  - (E) The hourly parking lots at the airport have recently been expanded and are therefore rarely filled to capacity.
15. In the course of her researches, a historian recently found two documents mentioning the same person, Erich Schnitzler. One, dated May 3, 1739, is a record of Schnitzler's arrest for peddling without a license. The second, undated, is a statement by Schnitzler asserting that he has been peddling off and on for 20 years.

The facts above best support which of the following conclusions?

- (A) Schnitzler started peddling around 1719.
- (B) Schnitzler was arrested repeatedly for peddling.
- (C) The undated document was written before 1765.
- (D) The arrest record was written after the undated document.

- (E) The arrest record provides better evidence that Schnitzler peddled than does the undated document.

16. The recent upheaval in the office-equipment retail business, in which many small firms have gone out of business, has been attributed to the advent of office equipment “superstores” whose high sales volume keeps their prices low. This analysis is flawed, however, since even today the superstores control a very small share of the retail market.

Which of the following, if true, would most weaken the argument that the analysis is flawed?

- (A) Most of the larger customers for office equipment purchase under contract directly from manufacturers and thus do not participate in the retail market.
- (B) The superstores’ heavy advertising of their low prices has forced prices down throughout the retail market for office supplies.
- (C) Some of the superstores that only recently opened have themselves gone out of business.
- (D) Most of the office equipment superstores are owned by large retailing chains that also own stores selling other types of goods.
- (E) The growing importance of computers in most offices has changed the kind of office equipment retailers must stock.

### CRITICAL REASONING TEST SECTION 17

25 Minutes 16 Questions

1. A report on acid rain concluded, “Most forests in Canada are not being damaged by acid rain.” Critics of the report insist the conclusion be changed to, “Most forests in Canada do not show visible symptoms of damage by acid rain, such as abnormal loss of leaves, slower rates of growth, or higher mortality.”

Which of the following, if true, provides the best logical justification for the critics’ insistence that the report’s conclusion be changed?

- (A) Some forests in Canada are being damaged by acid rain.
- (B) Acid rain could be causing damage for which symptoms have not yet become visible.
- (C) The report does not compare acid rain damage to Canadian forests with acid rain damage to forests in other countries.
- (D) All forests in Canada have received acid rain during the past fifteen years.
- (E) The severity of damage by acid rain differs from forest to forest.

2. In the past most airline companies minimized aircraft weight to minimize fuel costs. The safest airline seats were heavy, and airlines equipped their planes with few of these seats. This year the seat that has sold best to airlines has been the safest one—a clear indication that airlines are assigning a higher priority to safe seating than to minimizing fuel costs.

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

- (A) Last year’s best-selling airline seat was not the safest airline seat on the market.
- (B) No airline company has announced that it would be making safe seating a higher priority this year.
- (C) The price of fuel was higher this year than it had been in most of the years when the safest airline seats sold poorly.
- (D) Because of increases in the cost of materials, all airline seats were more expensive to manufacture this year than in any previous year.
- (E) Because of technological innovations, the safest airline seat on the market this year weighed less than most other airline seats on the market.

3. A computer equipped with signature-recognition software, which restricts access to a computer to those people whose signatures are on file, identifies a person’s signature by analyzing not only the form of the signature but also such characteristics as pen pressure and signing speed. Even the most adept forgers cannot duplicate all of the characteristics the program analyzes.

Which of the following can be logically concluded from the passage above?

- (A) The time it takes to record and analyze a signature makes the software impractical for everyday use.

- (B) Computers equipped with the software will soon be installed in most banks.
- (C) Nobody can gain access to a computer equipped with the software solely by virtue of skill at forging signatures.
- (D) Signature-recognition software has taken many years to develop and perfect.
- (E) In many cases even authorized users are denied legitimate access to computers equipped with the software.

4. Division manager: I want to replace the Microton computers in my division with Vitech computers.

General manager: Why?

Division manager: It costs 28 percent less to train new staff on the Vitech.

General manager: But that is not a good enough reason. We can simply hire only people who already know how to use the Microton computer.

Which of the following, if true, most seriously undermines the general manager's objection to the replacement of Microton computers with Vitechs?

- (A) Currently all employees in the company are required to attend workshops on how to use Microton computers in new applications.
- (B) Once employees learn how to use a computer, they tend to change employers more readily than before.
- (C) Experienced users of Microton computers command much higher salaries than do prospective employees who have no experience in the use of computers.
- (D) The average productivity of employees in the general manager's company is below the average productivity of the employees of its competitors.
- (E) The high costs of replacement parts make Vitech computers more expensive to maintain than Microton computers.

5. An airplane engine manufacturer developed a new engine model with safety features lacking in the earlier model, which was still being manufactured. During the first year that both were sold, the earlier model far outsold the new model; the manufacturer thus concluded that safety was not the customers' primary consideration.

Which of the following, if true, would most seriously weaken the manufacturer's conclusion?

- (A) Both private plane owners and commercial airlines buy engines from this airplane engine manufacturer.
- (B) Many customers consider earlier engine models better safety risks than new engine models, since more is usually known about the safety of the earlier models.
- (C) Many customers of this airplane engine manufacturer also bought airplane engines from manufacturers who did not provide additional safety features in their newer models.
- (D) The newer engine model can be used in all planes in which the earlier engine model can be used.
- (E) There was no significant difference in price between the newer engine model and the earlier engine model.

6. Between 1975 and 1985, nursing-home occupancy rates averaged 87 percent of capacity, while admission rates remained constant, at an average of 95 admissions per 1,000 beds per year. Between 1985 and 1988, however, occupancy rates rose to an average of 92 percent of capacity, while admission rates declined to 81 per 1,000 beds per year.

If the statements above are true, which of the following conclusions can be most properly drawn?

- (A) The average length of time nursing-home residents stayed in nursing homes increased between 1985 and 1988.
- (B) The proportion of older people living in nursing homes was greater in 1988 than in 1975.
- (C) Nursing home admission rates tend to decline whenever occupancy rates rise.
- (D) Nursing homes built prior to 1985 generally had fewer beds than did nursing homes built between 1985 and 1988.
- (E) The more beds a nursing home has, the higher its occupancy rate is likely to be.

7. Firms adopting "profit-related-pay" (PRP) contracts pay wages at levels that vary with the

firm's profits. In the metalworking industry last year, firms with PRP contracts in place showed productivity per worker on average 13 percent higher than that of their competitors who used more traditional contracts.

If, on the basis of the evidence above, it is argued that PRP contracts increase worker productivity, which of the following, if true, would most seriously weaken that argument?

- (A) Results similar to those cited for the metal-working industry have been found in other industries where PRP contracts are used.
- (B) Under PRP contracts costs other than labor costs, such as plant, machinery, and energy, make up an increased proportion of the total cost of each unit of output.
- (C) Because introducing PRP contracts greatly changes individual workers' relationships to the firm, negotiating the introduction of PRP contracts is complex and time consuming.
- (D) Many firms in the metalworking industry have modernized production equipment in the last five years, and most of these introduced PRP contracts at the same time.
- (E) In firms in the metalworking industry where PRP contracts are in place, the average take-home pay is 15 percent higher than it is in those firms where workers have more traditional contracts.

8. Crops can be traded on the futures market before they are harvested. If a poor corn harvest is predicted, prices of corn futures rise; if a bountiful corn harvest is predicted, prices of corn futures fall. This morning meteorologists are predicting much-needed rain for the corn-growing region starting tomorrow. Therefore, since adequate moisture is essential for the current crop's survival, prices of corn futures will fall sharply today.

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

- (A) Corn that does not receive adequate moisture during its critical pollination stage will not produce a bountiful harvest.
- (B) Futures prices for corn have been fluctuating more dramatically this season than last season.
- (C) The rain that meteorologists predicted for tomorrow is expected to extend well beyond the corn-growing region.
- (D) Agriculture experts announced today that a disease that has devastated some of the corn crop will spread widely before the end of the growing season.
- (E) Most people who trade in corn futures rarely take physical possession of the corn they trade.

9. A discount retailer of basic household necessities employs thousands of people and pays most of them at the minimum wage rate. Yet following a federally mandated increase of the minimum wage rate that increased the retailer's operating costs considerably, the retailer's profits increased markedly.

Which of the following, if true, most helps to resolve the apparent paradox?

- (A) Over half of the retailer's operating costs consist of payroll expenditures; yet only a small percentage of those expenditures go to pay management salaries.
- (B) The retailer's customer base is made up primarily of people who earn, or who depend on the earnings of others who earn, the minimum wage.
- (C) The retailer's operating costs, other than wages, increased substantially after the increase in the minimum wage rate went into effect.
- (D) When the increase in the minimum wage rate went into effect, the retailer also raised the age rate for employees who had been earning just above minimum wage.
- (E) The majority of the retailer's employees work as cashiers, and most cashiers are paid the minimum wage.

10. The cotton farms of Country Q became so productive that the market could not absorb all that they produced. Consequently, cotton prices fell. The government tried to boost cotton prices by offering farmers who took 25 percent of their cotton acreage out of production direct support payments up to a specified maximum per farm.

The government's program, if successful, will not be a net burden on the budget. Which of the following, if true, is the best basis for an explanation of how this could be so?

- (A) Depressed cotton prices meant operating losses for cotton farms, and the government lost revenue from taxes on farm profits.
- (B) Cotton production in several counties other than Q declined slightly the year that the support-payment program went into effect in Q.
- (C) The first year that the support-payment program was in effect, cotton acreage in Q was 5% below its level in the base year for the program.



- (D) The specified maximum per farm meant that for very large cotton farms the support payments were less per acre for those acres that were withdrawn from production than they were for smaller farms.
- (E) Farmers who wished to qualify for support payments could not use the cotton acreage that was withdrawn from production to grow any other crop.
11. United States hospitals have traditionally relied primarily on revenues from paying patients to offset losses from unreimbursed care. Almost all paying patients now rely on governmental or private health insurance to pay hospital bills. Recently, insurers have been strictly limiting what they pay hospitals for the care of insured patients to amounts at or below actual costs.

Which of the following conclusions is best supported by the information above?

- (A) Although the advance of technology has made expensive medical procedures available to the wealthy, such procedures are out of the reach of low-income patients.
- (B) If hospitals do not find ways to raising additional income for unreimbursed care, they must either deny some of that care or suffer losses if they give it.
- (C) Some patients have incomes too high for eligibility for governmental health insurance but are unable to afford private insurance for hospital care.
- (D) If the hospitals reduce their costs in providing care, insurance companies will maintain the current level of reimbursement, thereby providing more funds for unreimbursed care.
- (E) Even though philanthropic donations have traditionally provided some support for the hospitals, such donations are at present declining.
12. Generally scientists enter their field with the goal of doing important new research and accept as their colleagues those with similar motivation. Therefore, when any scientist wins renown as an expounder of science to general audiences, most other scientists conclude that this popularizer should no longer be regarded as a true colleague.

The explanation offered above for the low esteem in which scientific popularizers are held by research scientists assumes that

- (A) serious scientific research is not a solitary activity, but relies on active cooperation among a group of colleagues
- (B) research scientists tend not to regard as colleagues those scientists whose renown they envy
- (C) a scientist can become a famous popularizer without having completed any important research
- (D) research scientists believe that those who are well known as popularizers of science are not motivated to do important new research
- (E) no important new research can be accessible to or accurately assessed by those who are not themselves scientists
13. Mouth cancer is a danger for people who rarely brush their teeth. In order to achieve early detection of mouth cancer in these individuals, a town's public health officials sent a pamphlet to all town residents, describing how to perform weekly self-examinations of the mouth for lumps.

Which of the following, if true, is the best criticism of the pamphlet as a method of achieving the public health officials' goal?

- (A) Many dental diseases produce symptoms that cannot be detected in a weekly self-examination.
- (B) Once mouth cancer has been detected, the effectiveness of treatment can vary from person to person.
- (C) The pamphlet was sent to all town residents, including those individuals who brush their teeth regularly.
- (D) Mouth cancer is much more common in adults than in children.
- (E) People who rarely brush their teeth are unlikely to perform a weekly examination of their mouth.
14. Technological improvements and reduced equipment costs have made converting solar energy directly into electricity far more cost-efficient in the last decade. However, the threshold of economic viability for solar power (that is, the price per barrel to which oil would have to rise in order for new solar power plants to be more economical than new oil-fired power plants) is unchanged at thirty-five dollars.

Which of the following, if true, does most to help explain why the increased cost-efficiency of solar power has not decreased its threshold of economic viability?

- (A) The cost of oil has fallen dramatically.
- (B) The reduction in the cost of solar-power equipment has occurred despite increased raw material costs for that equipment.
- (C) Technological changes have increased the efficiency of oil-fired power plants.
- (D) Most electricity is generated by coal-fired or nuclear, rather than oil-fired, power plants.
- (E) When the price of oil increases, reserves of oil not previously worth exploiting become economically viable.

15. Start-up companies financed by venture capitalist have a much lower failure rate than companies financed by other means. Source of financing, therefore, must be a more important causative factor in the success of a start-up company than are such factors as the personal characteristics of the entrepreneur, the quality of strategic planning, or the management structure of the company.

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

- (A) Venture capitalists tend to be more responsive than other sources of financing to changes in a start-up company's financial needs.
- (B) The strategic planning of a start-up company is a less important factor in the long-term success of the company than are the personal characteristics of the entrepreneur.
- (C) More than half of all new companies fall within five years.
- (D) The management structures of start-up companies are generally less formal than the management structures of ongoing businesses.
- (E) Venture capitalists base their decisions to fund start-up companies on such factors as the characteristics of the entrepreneur and quality of strategic planning of the company.

16. The proportion of women among students enrolled in higher education programs has increased over the past decades. This is partly shown by the fact that in 1959, only 11 percent of the women between twenty and twenty-one were enrolled in college, while in 1981, 30 percent of the women between twenty and twenty-one were enrolled in college.

To evaluate the argument above, it would be most useful to compare 1959 and 1981 with regard to which of the following characteristics?

- (A) The percentage of women between twenty and twenty-one who were not enrolled in college
- (B) The percentage of women between twenty and twenty-five who graduated from college
- (C) The percentage of women who, after attending college, entered highly paid professions
- (D) The percentage of men between twenty and twenty-one who were enrolled in college
- (E) The percentage of men who graduated from high school

## CRITICAL REASONING TEST SECTION 18

25 Minutes 16 Questions

1. Since a rhinoceros that has no horn is worthless to poachers, the Wildlife Protection Committee plans to protect selected rhinoceroses from being killed by poachers by cutting off the rhinos' horns.

The Wildlife Protection Committee's plan assumes that

- (A) poachers do not kill rhinos that are worthless to them
- (B) hornless rhinos pose less of a threat to humans, including poachers, than do rhinos that have horns
- (C) rhinos are the only animals poachers kill for their horns
- (D) hornless rhinos can successfully defend their young against nonhuman predators
- (E) imposing more stringent penalties on poachers will not decrease the number of rhinos killed by poachers

2. Crimes are mainly committed by the young, and for this reason merely increasing the number of police officers or expenditures on police services has little effect on reducing the crime rate. In fact, the only factor associated with a crime-rate drop is a decrease in the number of people in the

community aged fourteen to thirty.

The findings above can best serve as part of an argument against

- (A) the likelihood that any law enforcement program will be effective in reducing the crime rate within a short time
- (B) increasing prison terms for young people found guilty of crimes
- (C) introducing compulsory military conscription for people aged seventeen to nineteen
- (D) raising the age at which students are permitted to leave school
- (E) a community's plan to increase the number of recreational and educational activities in which young adults can participate

3. A 20 percent decline in lobster catches in Maine waters since 1980 can be justifiably blamed on legislation passed in 1972 to protect harbor seals. Maine's population of harbor seals is now double the level existing before protection was initiated, and these seals are known to eat both fish and lobsters.

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

- (A) Harbor seals usually eat more fish than lobsters, but the seals are natural predators of both.
- (B) Although harbor seals are skillful predators of lobsters, they rarely finish eating their catch.
- (C) Harbor seals attract tourists to Maine's coastal areas, thus revitalizing the local economy.
- (D) Authors of the 1972 legislation protecting harbor seals were convinced that an increase in that animal's numbers would not have a measurably negative impact on the lobster catch.
- (E) The record lobster harvests of the late 1970's removed large numbers of mature lobsters from the reproductive stock.

4. Politician: Fewer people are entering the labor market now than previously. If the economy grows, the demand for motivated and educated people will far outstrip the supply. Some companies have already started to respond to this labor-market situation by finding better ways to keep their current employees. Their concern is a sure indicator that the economy is growing.

Which of the following is the best criticism of the politician's reasoning?

- (A) The fact that companies are making prudent preparations for a possible future development does not mean that this development is already taking place.
  - (B) The fact that some companies now try harder to keep their employees does not mean that they used to be indifferent to employee morale.
  - (C) The fact that demand will outstrip supply does not mean that there will be no supply at all.
  - (D) The fact that the number of new entrants into the labor market is declining does not mean that the number of new entrants is lower than it has ever been.
  - (E) The fact that current employees have become more valuable to some companies does not mean that those employees will do their jobs better than they used to.
5. Under current federal law, employers are allowed to offer their employees free parking spaces as a tax-free benefit, but they can offer employees only up to \$180 per year as a tax-free benefit for using mass transit. The government could significantly increase mass transit ridership by raising the limit of this benefit to meet commuters' transportation costs.

The proposal above to increase mass transit ridership assumes that

- (A) current mass transit systems are subject to unexpected route closings and delays
- (B) using mass transit creates less air pollution per person than using a private automobile
- (C) the parking spaces offered by employers as tax-free benefits can be worth as much as \$2,500 per year
- (D) many employees are deterred by financial considerations from using mass transit to commute to their places of employment
- (E) because of traffic congestion on major commuter routes, it is often faster to travel to one's place of employment by means of mass transit than by private automobile

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

"Government" does not exist as an independent entity defining policy. Instead there exists a group of democratically elected pragmatists sensitive to the electorate, who establish policies that will result in their own reelection. Therefore, if public policy is hostile to, say, environmental

concerns, it is not because of governmental perversity but because elected officials believe that—

- (A) environmentalists would be extremely difficult to satisfy with any policy, however environmentally sound
- (B) environmental concerns are being accommodated as well as public funds permit
- (C) the public is overly anxious about environmental deterioration
- (D) the majority of voters vote for certain politicians because of those politicians' idiosyncratic positions on policy issues
- (E) the majority of voters do not strongly wish for a different policy

7. Fresh potatoes generally cost about \$2 for a 10-pound bag, whereas dehydrated instant potatoes cost, on average, about \$3 per pound. It can be concluded that some consumers will pay 15 times as much for convenience, since sales of this convenience food continue to rise.

Which of the following, if true, indicates that there is a major flaw in the argument above?

- (A) Fresh potatoes bought in convenient 2-pound bags are about \$1 a bag, or 2 1/2 times more expensive than fresh potatoes bought in 10-pound bags.
- (B) Since fresh potatoes are 80 percent water, one pound of dehydrated potatoes is the equivalent of 5 pounds of fresh potatoes.
- (C) Peeled potatoes in cans are also more expensive than the less convenient fresh potatoes.
- (D) Retail prices of dehydrated potatoes have declined by 20 percent since 1960 to the current level of about \$3 a pound.
- (E) As a consequence of labor and processing costs, all convenience foods cost more than the basic foods from which they are derived.

8. Consumers in California seeking personal loans have fewer banks to turn to than do consumers elsewhere in the United States. This shortage of competition among banks explains why interest rates on personal loans in California are higher than in any other region of the United States.

Which of the following, if true, most substantially weakens the conclusion above?

- (A) Because of the comparatively high wages they must pay to attract qualified workers, California banks charge depositors more than banks elsewhere do for many of the services they offer.
- (B) Personal loans are riskier than other types of loans, such as home mortgage loans, that banks make.
- (C) Since bank deposits in California are covered by the same type of insurance that guarantees bank deposits in other parts of the United States, they are no less secure than deposits elsewhere.
- (D) The proportion of consumers who default on their personal loans is lower in California than in any other region of the United States.
- (E) Interest rates paid by California banks to depositors are lower than those paid by banks in other parts of the United States because in California there is less competition to attract depositors.

9. Technically a given category of insurance policy is underpriced if, over time, claims against it plus expenses associated with it exceed total income from premiums. But premium income can be invested and will then yield returns of its own. Therefore, an underpriced policy does not represent a net loss in every case.

The argument above is based on which of the following assumptions?

- (A) No insurance policies are deliberately underpriced in order to attract customers to the insurance company offering such policies.
- (B) A policy that represents a net loss to the insurance company is not an underpriced policy in every case.
- (C) There are policies for which the level of claims per year can be predicted with great accuracy before premiums are set.
- (D) The income earned by investing premium income is the most important determinant of an insurance company's profits.
- (E) The claims against at least some underpriced policies do not require paying out all of the premium income from those policies as soon as it is earned.

10. Purebred cows native to Mongolia produce, on average, 400 liters of milk per year; if Mongolian cattle are crossbred with European breeds, the crossbred cows can produce, on average, 2,700 liters per year. An international agency plans to increase the profitability of Mongolia's dairy sector by encouraging widespread crossbreeding of native Mongolian cattle with European breeds.

Which of the following, if true, casts the most serious doubt on the viability of the agency's plan?

- (A) Not all European breeds of cattle can be successfully bred with native Mongolian cattle.
- (B) Many young Mongolians now regard cattle raising as a low-status occupation because it is less lucrative than other endeavors open to them.
- (C) Mongolia's terrain is suitable for grazing native herds but not for growing the fodder needed to keep crossbred animals healthy.
- (D) Cowhide and leather products, not milk, make up the bulk of Mongolia's animal product exports to Europe.
- (E) Many European breeds of cattle attain average milk production levels exceeding 2,700 liters.

11. Any combination of overwork and stress inevitably leads of insomnia. Managers at HiCorp, Inc., all suffer from stress. A majority of the managers— despite their doctors' warnings—work well over 60 hours per week, whereas the other managers work no more than the normal 40 hours per week. HiCorp gives regular bonuses only to employees who work more than 40 hours per week.

Which of the following conclusions is most strongly supported by the statements above?

- (A) Managers at HiCorp work under conditions that are more stressful than the conditions under which managers at most other companies work
- (B) Most of the employee bonuses given by HiCorp are given to managers.
- (C) At HiCorp, insomnia is more widespread among managers than among any other group of employees.
- (D) No manager at HiCorp who works only 40 hours per week suffers from overwork.
- (E) Most of the managers at HiCorp who receive regular bonuses have insomnia.

12. Holiday receipts—the total sales recorded in the fourth quarter of the year—determine the economic success or failure of many retail businesses. Camco, a retailer selling just one camera model, is an excellent example. Camco's holiday receipts, on average, account for a third of its yearly total receipts and about half of its yearly profits.

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

- (A) Its fixed expenses per camera sold are higher during the fourth quarter than for any of the other three quarters.
- (B) It makes more profit during the first and third quarters combined than during the fourth quarter.
- (C) Its per-camera retail price is lower, on average, during the fourth quarter than during any one of the first three quarters.
- (D) It makes less profit, on average, for a given dollar amount of sales during the first three quarters combined than during the fourth quarter.
- (E) The per-camera price it pays to wholesalers is higher, on average, during the fourth quarter than during any of the other three quarters.

13. Canadians now increasingly engage in "out-shopping," which is shopping across the national border, where prices are lower. Prices are lower outside of Canada in large part because the goods-and-services tax that pays for Canadian social services is not applied.

Which one of the following is best supported on the basis of the information above?

- (A) If the upward trend in out-shopping continues at a significant level and the amounts paid by the government for Canadian social services are maintained, the Canadian goods-and-services tax will be assessed at a higher rate.
- (B) If Canada imposes a substantial tariff on the goods bought across the border, a reciprocal tariff on cross-border shopping in the other direction will be imposed, thereby harming

Canadian businesses.

- (C) The amounts the Canadian government pays out to those who provide social services to Canadians are increasing.
- (D) The same brands of goods are available to Canadian shoppers across the border as are available in Canada.
- (E) Out-shopping purchases are subject to Canadian taxes when the purchaser crosses the border to bring them into Canada.

14. Surveys indicate that 52 percent of all women aged eighteen to sixty-five are in the labor force (employed outside the home) in any given month. On the basis of these surveys, a market researcher concluded that 48 percent of all women aged eighteen to sixty-five are full-time homemakers year-round.

Which of the following, if true, would most seriously weaken the researcher's conclusion?

- (A) More women are in the labor force today than during any other period since the Second World War.
- (B) Many workers, both men and women, enter and exit the labor force frequently.
- (C) Although only a small sample of the total population is surveyed each month, these samples have been found to be a reliable indicator of total monthly employment.
- (D) Surveys show that more women than ever before consider having a rewarding job an important priority.
- (E) Women who are in the labor force have more discretionary income available to them than do women who are not.

15. Left-handed persons suffer more frequently than do right-handed persons from certain immune disorders, such as allergies. Left-handers tend to have an advantage over the right-handed majority, however, on tasks controlled by the right hemisphere of the brain, and mathematical reasoning is strongly under the influence of the right hemisphere in most people.

If the information above is true, it best supports which of the following hypotheses?

- (A) Most people who suffer from allergies or other such immune disorders are left-handed rather than right-handed.
- (B) Most left-handed mathematicians suffer from some kind of allergy.
- (C) There are proportionally more left-handers among people whose ability to reason mathematically is above average than there are among people with poor mathematical reasoning ability.
- (D) If a left-handed person suffers from an allergy, that person will probably be good at mathematics.
- (E) There are proportionally more people who suffer from immune disorders such as allergies than there are people who are left-handed or people whose mathematical reasoning ability is unusually good.

16. After observing the Earth's weather patterns and the 11-year sunspot cycle of the Sun for 36 years, scientists have found that high levels of sunspot activity precede shifts in wind patterns that affect the Earth's weather. One can conclude that meteorologists will be able to improve their weather forecasts based on this information.

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

- (A) Weather forecasts are more detailed today than they were 36 years ago.
- (B) Scientists can establish that sunspot activity directly affects the Earth's weather.
- (C) Evidence other than sunspot activity has previously enabled meteorologists to forecast the weather conditions that are predictable on the basis of sunspot activity.
- (D) Scientists have not determined why the sunspot activity on the Sun follows an 11-year cycle.
- (E) It has been established that predictable wind patterns yield predictable weather patterns.

### CRITICAL REASONING TEST SECTION 19

25 Minutes 16 Questions

1. A publisher is now providing university professors with the option of ordering custom textbooks

for their courses. The professors can edit out those chapters of a book they are not interested in and add material of their own choosing.

The widespread use of the option mentioned above is LEAST likely to contribute to fulfilling which of the following educational objectives?

- (A) Coverage of material relevant to a particular student body's specific needs
- (B) Offering advanced elective courses that pursue in-depth investigation of selected topics in a field
- (C) Ensuring that students nationwide engaged in a specific course of study are uniformly exposed to a basic set of readings
- (D) Making the textbooks used in university courses more satisfactory from the individual teacher's point of view
- (E) Keeping students' interest in a course by offering lively, well-written reading assignments

2. Mechanicorp's newest product costs so little to make that it appears doubtful the company will be able to sell it without increasing the markup the company usually allows for profit: potential clients would simply not believe that something so inexpensive would really work. Yet Mechanicorp's reputation is built on fair prices incorporating only modest profit margins.

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

- (A) Mechanicorp will encounter difficulties in trying to set a price for its newest product that will promote sales without threatening to compromise the company's reputation.
- (B) Mechanicorp achieves large annual profits, despite small profits per unit sold, by means of a high volume of sales.
- (C) Mechanicorp made a significant computational error in calculating the production costs for its newest product.
- (D) Mechanicorp's newest product is intended to perform tasks that can be performed by other devices costing less to manufacture.
- (E) Mechanicorp's production processes are designed with the same ingenuity as are the products that the company makes.

3. Companies in the country of Kollontay can sell semiconductors in the country of Valdivia at a price that is below the cost to Valdivian companies of producing them. To help those Valdivian companies, the Valdivian legislature plans to set a minimum selling price in Valdivia for semiconductors manufactured in Kollontay that is ten percent greater than the average production costs for companies in Valdivia.

Which of the following, if true, most seriously threatens the success of the plan?

- (A) The annual rate of inflation in Kollontay is expected to exceed ten percent within the next year.
- (B) Valdivia is not the only country where companies in Kollontay currently sell semiconductors.
- (C) Some Valdivian companies that sell semiconductors have announced that they plan to decrease their price for semiconductors.
- (D) The government of Kollontay will also set a minimum price for selling semiconductors in that country.
- (E) Emerging companies in countries other than Kollontay will still be able to sell semiconductors in Valdivia at a price below the cost to Valdivian companies to manufacture them.

4. 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.

5. Airplane manufacturer: I object to your characterization of our X-387 jets as dangerous. No X-387 in commercial use has ever crashed or even had a serious malfunction.

Airline regulator: The problem with the X-387 is not that it, itself, malfunctions, but that it creates a turbulence in its wake that can create hazardous conditions for aircraft in its vicinity.

The airline regulator responds to the manufacturer by doing which of the following?

- (A) Characterizing the manufacturer's assertion as stemming from subjective interest rather than from objective evaluation of the facts
- (B) Drawing attention to the fact that the manufacturer's interpretation of the word "dangerous" is too narrow
- (C) Invoking evidence that the manufacturer has explicitly dismissed as irrelevant to the point at issue
- (D) Citing statistical evidence that refutes the manufacturer's claim
- (E) Casting doubt on the extent of the manufacturer's knowledge of the number of recent airline disasters

6. Damaged nerves in the spinal cord do not regenerate themselves naturally, nor even under the spur of nerve-growth stimulants. The reason, recently discovered, is the presence of nerve-growth inhibitors in the spinal cord. Antibodies that deactivate those inhibitors have now been developed. Clearly, then, nerve repair will be a standard medical procedure in the foreseeable future.

Which of the following, if true, casts the most serious doubt on the accuracy of the prediction above?

- (A) Prevention of the regeneration of damaged nerves is merely a by-product of the main function in the human body of the substances inhibiting nerve growth.
- (B) Certain nerve-growth stimulants have similar chemical structures to those of the antibodies against nerve-growth inhibitors.
- (C) Nerves in the brain are similar to nerves in the spinal cord in their inability to regenerate themselves naturally.
- (D) Researchers have been able to stimulate the growth of nerves not located in the spinal cord by using only nerve-growth stimulants.
- (E) Deactivating the substances inhibiting nerve growth for an extended period would require a steady supply of antibodies.

7. The human body secretes more pain-blocking hormones late at night than during the day. Consequently, surgical patients operated on at night need less anesthesia. Since larger amounts of anesthesia pose greater risks for patients, the risks of surgery could be reduced if operations routinely took place at night.

Which of the following, if true, argues most strongly against the view that surgical risks could be reduced by scheduling operations at night?

- (A) Energy costs in hospitals are generally lower at night than they are during the day.
- (B) More babies are born between midnight and seven o'clock in the morning than at any other time.
- (C) Over the course of a year, people's biological rhythms shift slightly in response to changes in the amounts of daylight to which the people are exposed.
- (D) Nurses and medical technicians are generally paid more per hour when they work during the night than when they work during the day.
- (E) Manual dexterity and mental alertness are lower in the late night than they are during the day, even in people accustomed to working at night.

Questions 8-9

Walter: A copy of an artwork should be worth exactly what the original is worth if the two works are visually indistinguishable. After all, if the two works are visually indistinguishable, they have all the same qualities, and if they have all the same qualities, their prices should be equal.

Marissa: How little you understand art! Even if someone could make a perfect copy that is



visually indistinguishable from the original, the copy would have a different history and hence not have all the same qualities as the original.

8. Which of the following is a point at issue between Walter and Marissa?

- (A) Whether a copy of an artwork could ever be visually indistinguishable from the original
- (B) Whether the reproduction of a work of art is ever worth more than the original is worth
- (C) Whether a copy of a work of art is ever mistaken for the original
- (D) Whether a copy of a work of art could have all the same qualities as the original
- (E) Whether originality is the only valuable attribute that a work of art can possess

9. Marissa uses which of the following techniques in attempting to refute Walter's argument?

- (A) Attacking his assumption that the price of an artwork indicates its worth
- (B) Raising a point that would undermine one of the claims on which his conclusion is based
- (C) Questioning his claim that a perfect copy of a work of art would be visually indistinguishable from the original
- (D) Giving reason to believe that Walter is unable to judge the quality of a work of art because of his inadequate understanding of the history of art
- (E) Proposing alternative criteria for determining whether two works of art are visually indistinguishable

10. Magnetic resonance imaging (MRI)—a noninvasive diagnostic procedure—can be used to identify blockages in the coronary arteries. In contrast to angiograms—the invasive procedure customarily used—MRI's pose no risk to patients. Thus, to guarantee patient safety in the attempt to diagnose arterial blockages, MRI's should replace angiograms in all attempts at diagnosing coronary blockages.

Which of the following, if true, would most support the recommendation above?

- (A) Angiograms can be used to diagnose conditions other than blockages in arteries.
- (B) MRI's were designed primarily in order to diagnose blockages in the coronary arteries.
- (C) Angiograms reveal more information about the nature of a blockage than an MRI can.
- (D) An MRI is just as likely as an angiogram to identify an arterial blockage.
- (E) Some patients for whom an angiogram presents no risk are unwilling to undergo an MRI.

11. Naturally occurring chemicals cannot be newly patented once their structures have been published. Before a naturally occurring chemical compound can be used as a drug, however, it must be put through the same rigorous testing program as any synthetic compound, culminating in a published report detailing the chemical's structure and observed effects.

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

- (A) Any naturally occurring chemical can be reproduced synthetically once its structure is known.
- (B) Synthetically produced chemical compounds cannot be patented unless their chemical structures are made public.
- (C) If proven no less effective, naturally occurring chemicals are to be preferred to synthetic compounds for use in drugs.
- (D) Once a naturally occurring compound has been approved for use as a drug, it can no longer be newly patented.
- (E) A naturally occurring chemical cannot be patented unless its effectiveness as a drug has been rigorously established.

12. A public-service advertisement advises that people who have consumed alcohol should not drive until they can do so safely. In a hospital study, however, subjects questioned immediately after they consumed alcohol underestimated the time necessary to regain their driving ability. This result indicates that many people who drink before driving will have difficulty following the advertisement's advice.

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

- (A) Many people, if they plan to drink alcohol, make arrangements beforehand for a nondrinker to drive them home.
- (B) The subjects in the hospital study generally rated their abilities more conservatively than would people drinking alcohol outside a hospital setting.
- (C) Some people refrain from drinking if they will have to drive to get home afterward.
- (D) The subjects in the hospital study were also questioned about the time necessary to regain

abilities that do not play an important role in driving safely.

- (E) Awareness of the public-service advertisement is higher among the general population than it was among the subjects in the hospital study.

13. Investigator: XYZ Coins has misled its clients by promoting some coins as “extremely rare” when in fact those coins are relatively common and readily available.

XYZ agent: That is ridiculous. XYZ Coins is one of the largest coin dealers in the world. We authenticate the coins we sell through a nationally recognized firm and operate a licensed coin dealership.

The XYZ agent’s reply is most vulnerable to the criticism that it

- (A) exaggerates the investigator’s claims in order to make them appear absurd
- (B) accuses the investigator of bias but presents no evidence to support that accusation
- (C) fails to establish that other coin dealers do not also authenticate the coins those dealers sell
- (D) lists strengths of XYZ Coins while failing to address the investigator’s charge
- (E) provides no definition for the inherently vague phrase “extremely rare”

14. Both Writewell and Express provide round-the-clock telephone assistance to any customer who uses their word-processing software. Since customers only call the hot lines when they find the software difficult to use, and the Writewell hot line receives four times as many calls as the Express hot line, Writewell’s word-processing software must be more difficult to use than Express’s.

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

- (A) Calls to the Express hot line are almost twice as long, on average, as are calls to the Writewell hot line.
- (B) Express has three times the number of word-processing software customers that Writewell has.
- (C) Express receives twice as many letters of complaint about its word-processing software as Writewell receives about its word-processing software.
- (D) The number of calls received by each of the two hot lines has been gradually increasing.
- (E) The Writewell hot-line number is more widely publicized than the Express hot-line number.

15. Over the last century, paleontologists have used small differences between fossil specimens to classify triceratops into sixteen species. This classification is unjustified, however, since the specimens used to distinguish eleven of the species come from animals that lived in the same area at the same time.

Which of the following, if true, would enable the conclusion of the argument to be properly drawn?

- (A) Not every species that lived in a given area is preserved as a fossil.
- (B) At least one individual of every true species of triceratops has been discovered as a fossil specimen.
- (C) No geographical area ever supports more than three similar species at the same time.
- (D) In many species, individuals display quite marked variation.
- (E) Differences between fossil specimens of triceratops that came from the same area are no less distinctive than differences between specimens that came from different areas.

16. Many consumers are concerned about the ecological effects of wasteful packaging. This concern probably explains why stores have been quick to stock new cleaning products that have been produced in a concentrated form. The concentrated form is packaged in smaller containers that use less plastic and require less transportation space.

Which of the following, if true, most seriously undermines the explanation offered above?

- (A) Few consumers believe that containers of concentrated cleaning products are merely small packages of regular cleaning products.
- (B) The containers in which concentrated cleaning products are packaged are no harder to recycle than those in which regular cleaning products are packaged.
- (C) Those concentrated cleaning products that are intended to be used diluted have clear

instructions for dilution printed on their labels.

- (D) The smaller containers of concentrated cleaning products enable supermarkets and drugstores to increase their revenues from a given shelf space.
- (E) Consumer pressure has led to the elimination of wasteful cardboard packaging that was used for compact discs.

### CRITICAL REASONING TEST SECTION 20

25 Minutes 16 Questions

1. In the first half of this year, from January to June, about three million videocassette recorders were sold. This number is only 35 percent of the total number of videocassette recorders sold last year. Therefore, total sales of videocassette recorders will almost certainly be lower for this year than they were for last year.

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

- (A) The total number of videocassette recorders sold last year was lower than the total number sold in the year before that.
- (B) Most people who are interested in owning a videocassette recorder have already purchased one.
- (C) Videocassette recorders are less expensive this year than they were last year.
- (D) Of the videocassette recorders sold last year, almost 60 percent were sold in January.
- (E) Typically, over 70 percent of the sales of videocassette recorders made in a year occur in the months of November and December.

2. Mud from a lake on an uninhabited wooded island in northern Lake Superior contains toxic chemicals, including toxaphene, a banned pesticide for cotton that previously was manufactured and used, not in nearby regions of Canada or the northern United States, but in the southern United States. No dumping has occurred on the island. The island lake is sufficiently elevated that water from Lake Superior does not reach it.

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

- (A) The waters of the island lake are more severely polluted than those of Lake Superior.
- (B) The toxaphene was carried to the island in the atmosphere by winds.
- (C) Banning chemicals such as toxaphene does not aid the natural environment.
- (D) Toxaphene has adverse effects on human beings but not on other organisms.
- (E) Concentrations of toxaphene in the soil of cotton-growing regions are not sufficient of be measurable.

3. Last year in the United States, women who ran for state and national offices were about as likely to win as men. However, only about fifteen percent of the candidates for these offices were women. Therefore, the reason there are so few women who win elections for these offices is not that women have difficulty winning elections but that so few women want to run.

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

- (A) Last year the proportion of women incumbents who won reelection was smaller than the proportion of men incumbents who won reelection.
- (B) Few women who run for state and national offices run against other women.
- (C) Most women who have no strong desire to be politicians never run for state and national offices.
- (D) The proportion of people holding local offices who are women is smaller than the proportion of people holding state and national offices who are women.
- (E) Many more women than men who want to run for state and national offices do not because they cannot get adequate funding for their campaigns.

4. Samples from a ceramic vase found at a tomb in Sicily prove that the vase was manufactured in Greece. Since the occupant of the tomb died during the reign of a Sicilian ruler who lived 2,700 years ago, the location of the vase indicates that there was trade between Sicily and Greece 2,700 years ago.

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

- (A) Sicilian potters who lived during the reign of the ruler did not produce work of the same level of quality as did Greek potters.

- (B) Sicilian clay that was used in the manufacture of pottery during the ruler's reign bore little resemblance to Greek clay used to manufacture pottery at that time.
- (C) At the time that the occupant of the tomb was alive, there were ships capable of transporting large quantities of manufactured goods between Sicily and Greece.
- (D) The vase that was found at the Sicilian tomb was not placed there many generations later by descendants of the occupant of the tomb.
- (E) The occupant of the tomb was not a member of the royal family to which the Sicilian ruler belonged.

5. In several cities, the government is going ahead with ambitious construction projects despite the high office- vacancy rates in those cities. The vacant offices, though available for leasing, unfortunately do not meet the requirements for the facilities needed, such as court houses and laboratories. The government, therefore, is not guilty of any fiscal wastefulness.

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

- (A) Adaptation of vacant office space to meet the government's requirements, if possible, would not make leasing such office space a more cost-effective alternative to new construction.
- (B) The government prefers leasing facilities to owning them in cases where the two alternatives are equally cost-effective.
- (C) If facilities available for leasing come very close to meeting the government's requirements for facilities the government needs, the government can relax its own requirements slightly and consider those facilities in compliance.
- (D) The government's construction projects would not on being completed, add to the stock of facilities available for leasing in the cities concerned.
- (E) Before embarking on any major construction project, the government is required by law to establish beyond any reasonable doubt that there are no alternatives that are most cost-effective.

6. Potato cyst nematodes are a pest of potato crops. The nematodes can lie dormant for several years in their cysts, which are protective capsules, and do not emerge except in the presence of chemicals emitted by potato roots. A company that has identified the relevant chemicals in planning to market them to potato farmers to spread on their fields when no potatoes are planted; any nematodes that emerge will soon starve to death.

Which of the following, if true, best supports the claim that the company's plan will be successful?

- (A) Nematodes that have emerged from their cysts can be killed by ordinary pesticides.
- (B) The only part of a potato plant that a nematode eats is the roots.
- (C) Some bacteria commonly present in the roots of potatoes digest the chemicals that cause the nematodes to emerge from their cysts.
- (D) Trials have shown that spreading even minute quantities of the chemicals on potato fields caused nine-tenths of the nematodes present to emerge from their cysts.
- (E) the chemicals that cause the nematodes to emerge from their cysts are not emitted all the time the potato plant is growing.

7. It is better for the environment if as much of all packaging as possible is made from materials that are biodegradable in landfills. Therefore, it is always a change for the worse to replace packaging made from paper or cardboard with packaging made from plastics that are not biodegradable in landfills.

Which of the following, if true, constitutes the strongest objection to the argument above?

- (A) The paper and cardboard used in packaging are usually not biodegradable in landfills.
- (B) Some plastic used in packaging is biodegradable in landfills.
- (C) In many landfills, a significant proportion of space is taken up by materials other than discarded packaging materials.
- (D) It is impossible to avoid entirely the use of packaging materials that are not biodegradable in landfills.
- (E) Sometimes, in packaging an item, plastics that are not biodegradable in landfills are combined with cardboard.

8. Any serious policy discussion about acceptable levels of risk in connection with explosions is not well served if the participants fail to use the word "explosion" and use the phrase "energetic disassembly" instead. In fact, the word "explosion" elicits desirable reactions, such as a heightened level of attention, whereas the substitute phrase does not. Therefore, of the two terms,

“explosion” is the one that should be used throughout discussions of this sort.

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

- (A) In the kind of discussion at issue, the advantages of desirable reactions to the term “explosion” outweigh the drawbacks, if any, arising from undesirable reactions to that term.
- (B) The phrase “energetic disassembly” has not so far been used as a substitute for the word “explosion” in the kind of discussion at issue.
- (C) In any serious policy discussion, what is said by the participants is more important than how it is put into words.
- (D) The only reason that people would have for using “energetic disassembly” in place of “explosion” is to render impossible any serious policy discussion concerning explosions.
- (E) The phrase “energetic disassembly” is not necessarily out of place in describing a controlled rather than an accidental explosion.

9. Mannis Corporation’s archival records are stored in an obsolete format that is accessible only by its current computer system; thus they are inaccessible when that system is not functioning properly. In order to avoid the possibility of losing access to their archival records in the case of computer malfunction, Mannis plans to replace its current computer system with a new system that stores records in a format that is accessible to several different systems.

The answer to which of the following questions would be most helpful in evaluating the effectiveness of the plan as a means of retaining access to the archival records?

- (A) Will the new computer system require fewer operators than the current system requires?
- (B) Has Mannis Corporation always stored its archival records in a computerized format?
- (C) Will the new computer system that Mannis plans ensure greater security for the records stored than does Mannis’ current system?
- (D) Will Mannis’ current collection of archival records be readily transferable to the new computer system?
- (E) Will the new computer system be able to perform many more tasks than the current system is able to perform?

10. Last year the worldwide paper industry used over twice as much fresh pulp (pulp made directly from raw plant fibers) as recycled pulp (pulp made from wastepaper). A paper-industry analyst has projected that by 2010 the industry will use at least as much recycled pulp annually as it does fresh pulp, while using a greater quantity of fresh pulp than it did last year.

If the information above is correct and the analyst’s projections prove to be accurate, which of the following projections must also be accurate?

- (A) In 2010 the paper industry will use at least twice as much recycled pulp as it did last years.
- (B) In 2010 the paper industry will use at least twice as much total pulp as it did last year.
- (C) In 2010 the paper industry will produce more paper from a given amount of pulp than it did last year.
- (D) As compared with last year, in 2010 the paper industry will make more paper that contains only recycled pulp.
- (E) As compared with last year, in 2010 the paper industry will make less paper that contains only fresh pulp.

11. In malaria-infested areas, many children tend to suffer several bouts of malaria before becoming immune to the disease. Clearly, what must be happening is that those children’s immune systems are only weakly stimulated by any single exposure to the malaria parasite and need to be challenged several times to produce an effective immune response.

Which of the following, if true, most seriously undermines the explanatory hypothesis?

- (A) Immediately after a child has suffered a bout of malaria, the child’s caregivers tend to go to great lengths in taking precautions to prevent another infection, but this level of attention is not sustained.
- (B) Malaria is spread from person to person by mosquitoes, and mosquitoes have become increasingly resistant to the pesticides used to control them.
- (C) A certain gene, if inherited by children from only one of their parents, can render those

children largely immune to infection with malaria.

- (D) Antimalaria vaccines, of which several are in development, are all designed to work by stimulating the body's immune system.
- (E) There are several distinct strains of malaria, and the body's immune response to any one of them does not protect it against the others.

12. An advertisement designed to convince readers of the great durability of automobiles manufactured by the Deluxe Motor Car Company cites as evidence the fact that over half of all automobiles built by the company since 1970 are still on the road today, compared to no more than a third for any other manufacturer.

Which of the following, if true, most strongly supports the advertisement's argument?

- (A) After taking inflation into account, a new Deluxe automobile costs only slightly more than a new model did in 1970.
- (B) The number of automobiles built by Deluxe each year has not increased sharply since 1970.
- (C) Owners of Deluxe automobiles typically keep their cars well maintained.
- (D) Since 1970, Deluxe has made fewer changes in the automobiles it manufactures than other car companies have made in their automobiles.
- (E) Deluxe automobiles have been selling at relatively stable prices in recent years.

13. Many state legislatures are considering proposals to the effect that certain policies should be determined not by the legislature itself but by public referenda in which every voter can take part. Critics of the proposals argue that the outcomes of public referenda would be biased, since wealthy special-interest groups are able to influence voters' views by means of television advertisements.

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

- (A) Many state legislators regard public referenda as a way of avoiding voting on issues on which their constituents are divided.
- (B) During elections for members of the legislature, the number of people who vote is unaffected by whether the candidates run television advertisements or not.
- (C) Proponents of policies that are opposed by wealthy special-interest groups are often unable to afford advertising time on local television stations.
- (D) Different special-interest groups often take opposing positions on questions of which policies the state should adopt.
- (E) Television stations are reluctant to become associated with any one political opinion, for fear of losing viewers who do not share that opinion.

14. 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 pre 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.

15. In the United States, vacationers account for more than half of all visitors to what are technically called "pure aquariums" but for fewer than one quarter of all visitors to zoos, which usually include a "zoo aquarium" of relatively modest scope.

Which of the following, if true, most helps to account for the difference described above between visitors to zoos and visitors to pure aquariums?

- (A) In cities that have both a zoo and a pure aquarium, local residents are twice as likely to

- visit the aquarium as they are to visit the zoo.
- (B) Virtually all large metropolitan areas have zoos, whereas only a few large metropolitan areas have pure aquariums.
- (C) Over the last ten years, newly constructed pure aquariums have outnumbered newly established zoos by a factor of two to one.
- (D) People who visit a zoo in a given year are two times more likely to visit a pure aquarium that year than are people who do not visit a zoo.
- (E) The zoo aquariums of zoos that are in the same city as a pure aquarium tend to be smaller than the aquariums of zoos that have no pure aquarium nearby.

16. Which of the following, if true, is the most logical completion of the argument below?

The tax system of the Republic of Grootland encourages borrowing by granting its taxpayers tax relief for interest paid on loans. The system also discourages saving by taxing any interest earned on savings. Nevertheless, it is clear that Grootland's tax system does not consistently favor borrowing over saving, for if it did, there would be no——.

- (A) tax relief in Grootland for those portions of a taxpayer's income, if any, that are set aside to increase that taxpayer's total savings
- (B) tax relief in Grootland for the processing fees that taxpayers pay to lending institutions when obtaining certain kinds of loans
- (C) tax relief in Grootland for interest that taxpayers are charged on the unpaid balance in credit card accounts
- (D) taxes due in Grootland on the cash value of gifts received by taxpayers from banks trying to encourage people to open savings accounts
- (E) taxes due in Grootland on the amount that a taxpayer has invested in interest-bearing savings accounts

## GMAT 逻辑答案

Section 1:	DBEDA CEEDD CEACA BDCCA
Section 2:	ACBEB EDBBB CABAD AAEAD
Section 3:	BBCEE ACCCE DBBDA CCDAE
Section 4:	ACBAB BBDDE CECBC DACEB
Section 5:	DEEDC BBDCE DECAA CCEAC
Section 6:	BBBCE CBCCD DEAAD DEEAC
Section 7:	CCECA DDCAA DADBE EDBEB
Section 8:	DABDC AABEB AAEBB EBCDE
Section 9:	ABDDDB ECDAE BDACE BBACA
Section 10:	CCEDA DADCA DCBBB EABBD
Section 11:	ADBCA EDBEC CDEAB ACBEB
Section 12:	DBDCE C ECA CCECA B EED
Section 13:	DECBA D DEC CAEAE D
Section 14:	ECABA BEBAE CBDDA B
Section 15:	DEDAB DADAC CEBCB D
Section 16:	DABEB ECDBB CCCAC B
Section 17:	BECCB ADDBA BDECE D
Section 18:	AAEAD EBAEC EDABC C
Section 19:	CAEEB AEDBD DBDBC D
Section 20:	EBEDA DAADA EBCDB A