

REVIEW

The only study guide with
800 real GMAT® questions
—and their answers—
by the creators
of the test.

THE OFFICIAL GUIDE FOR
GMAT® REVIEW, 11TH EDITION

- The -
OFFICIAL
Guide

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

8.0 Critical Reasoning

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

You will have 75 minutes to complete the Verbal section, or about 1 3/4 minutes to answer each question. Although critical reasoning questions are based on written passages, these passages are shorter than reading comprehension passages. They tend to be less than 100 words in length and generally are followed by one or two questions. For these questions, you will see a split computer screen. The written passage will remain visible as each question associated with that passage appears in turn on the screen. You will see only one question at a time.

Critical reasoning questions are designed to test the reasoning skills involved in (1) making arguments, (2) evaluating arguments, and (3) formulating or evaluating a plan of action. The materials on which questions are based are drawn from a variety of sources. The GMAT® test does not suppose any familiarity with the subject matter of those materials.

In these questions, you are to analyze the situation on which each question is based, and then select the answer choice that most appropriately answers the question. Begin by reading the passages carefully, then reading the five answer choices. If the correct answer is not immediately obvious to you, see whether you can eliminate some of the wrong answers. Reading the passage a second time may be helpful in illuminating subtleties that were not immediately evident.

Answering critical reasoning questions requires no specialized knowledge of any particular field; you don't have to have knowledge of the terminology and conventions of formal logic. The sample critical reasoning questions in this chapter illustrate the variety of topics the exam may cover, the kinds of questions it may ask, and the level of analysis it requires.

The following pages describe what critical reasoning questions are designed to measure and present the directions that will precede questions of this type. Sample questions and explanations of the correct answers follow.

8.1 What Is Measured

Critical reasoning questions are designed to provide one measure of your ability to reason effectively in the following areas:

- **Argument construction**

Questions in this category may ask you to recognize such things as the basic structure of an argument, properly drawn conclusions, underlying assumptions, well-supported explanatory hypotheses, and parallels between structurally similar arguments.

- **Argument evaluation**

These questions may ask you to analyze a given argument and to recognize such things as factors that would strengthen or weaken the given argument; reasoning errors committed in making that argument; and aspects of the method by which the argument proceeds.

- **Formulating and evaluating a plan of action**

This type of question may ask you to recognize such things as the relative appropriateness, effectiveness, or efficiency of different plans of action; factors that would strengthen or weaken the prospects of success of a proposed plan of action; and assumptions underlying a proposed plan of action.

8.2 Test-Taking Strategies for Critical Reasoning Questions

1. **Read very carefully the set of statements on which a question is based.**

Pay close attention to—

- what is put forward as factual information;
- what is not said but necessarily follows from what is said;
- what is claimed to follow from facts that have been put forward; and
- how well substantiated are any claims that a particular conclusion follows from the facts that have been put forward.

In reading the arguments, it is important to pay attention to the logical reasoning used; the actual truth of statements portrayed as fact is not important.

2. **Identify the conclusion.**

The conclusion does not necessarily come at the end of the text; it may come somewhere in the middle or even at the beginning. Be alert to clues in the text that an argument follows logically from another statement or statements in the text.

3. **Determine exactly what each question asks.**

You might find it helpful to read the question first, before reading the material on which it is based; don't assume that you know what you will be asked about an argument. An argument may have obvious flaws, and one question may ask you to detect them. But another question may direct you to select the one answer choice that does NOT describe a flaw in the argument.

4. **Read all the answer choices carefully.**

Do not assume that a given answer is the best without first reading all the choices.

8.3 The Directions

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

For this question, select the best of the answer choices given.

8.4 Critical Reasoning Sample Questions

For these questions, select the best of the answer choices given.

1. Some economists view the Kennedy–Johnson tax cut of 1964, which radically reduced corporate and individual taxes, as the impetus for the substantial prosperity enjoyed by the United States in the late 1960's and early 1970's.

Which of the following, if true, would most weaken the claim that the tax cut of 1964 was the impetus for economic prosperity?

- (A) Modernized, more productive factories were built in the late 1960's as a result of the funds made available by the tax cut.
- (B) Improved economic conditions in Western Europe and Japan resulted in substantially increased demand for United States manufactured goods in the late 1960's.
- (C) The tax cut of 1964 contained regulations concerning tax shelters that prompted investors to transfer their savings to more economically productive investments.
- (D) Personal income after taxes rose in the years following 1964.
- (E) In the late 1960's, unemployment was relatively low compared with the early 1960's.

2. In order to increase profits during a prolonged slowdown in sales, the largest manufacturers of automobiles in the United States have instituted record-setting price increases on all their models. The manufacturers believe that this strategy will succeed, even though it is inconsistent with the normal relationship between price and demand.

The manufacturers' plan to increase profits relies on which of the following assumptions?

- (A) Automobile manufacturers will, of necessity, raise prices whenever they introduce a new model.
- (B) The smaller automobile manufacturers will continue to take away a large percentage of business from the largest manufacturers.

- (C) The increased profit made on cars sold will more than compensate for any decline in sales caused by the price increases.
- (D) New safety restraints that will soon become mandatory for all new cars will not be very costly for manufacturers to install.
- (E) Low financing and extended warranties will attract many price-conscious consumers.

3. "Life expectancy" is the average age at death of the entire live-born population. In the middle of the nineteenth century, life expectancy in North America was 40 years, whereas now it is nearly 80 years. Thus, in those days, people must have been considered old at an age that we now consider the prime of life.

Which of the following, if true, undermines the argument above?

- (A) In the middle of the nineteenth century, the population of North America was significantly smaller than it is today.
- (B) Most of the gains in life expectancy in the last 150 years have come from reductions in the number of infants who die in their first year of life.
- (C) Many of the people who live to an advanced age today do so only because of medical technology that was unknown in the nineteenth century.
- (D) The proportion of people who die in their seventies is significantly smaller today than is the proportion of people who die in their eighties.
- (E) More people in the middle of the nineteenth century engaged regularly in vigorous physical activity than do so today.

4. From June through August 1987, Premiere Airlines had the best on-time service of 10 United States airlines. From January through March 1988, Premiere Airlines had the worst on-time service of the 10 airlines. The on-time performance ranking of the other nine airlines relative to each other remained unchanged.

- Which of the following, if true, would most contribute to an explanation of the facts above?
- Although Premiere Airlines only revoked its policy of routinely holding flights for late passengers in the fall of 1987, the other nine airlines never had that policy.
 - Premiere Airlines reduced its business by 10 percent when it raised its rates in the fall of 1987 to compensate for rising gasoline costs.
 - Premiere Airlines bought five new planes in the fall of 1987 that proved to have fewer mechanical problems than the ones they replaced.
 - Premiere Airlines serves New England, which has heavy winter snowfalls, whereas the other airlines do most of their business in warmer regions of the country.
 - Although all 10 airlines strive to keep their flights on schedule, overcrowded airports increased flight delays for all 10 airlines in January 1988 as compared with June 1987.
5. Homeowners aged 40 to 50 are more likely to purchase ice cream and are more likely to purchase it in large amounts than are members of any other demographic group. The popular belief that teenagers eat more ice cream than adults must, therefore, be false.
- The argument is flawed primarily because the author
- fails to distinguish between purchasing and consuming
 - does not supply information about homeowners in age groups other than 40 to 50
 - depends on popular belief rather than on documented research findings
 - does not specify the precise amount of ice cream purchased by any demographic group
 - discusses ice cream rather than more nutritious and healthful foods

- Not all life depends on energy from sunlight. Microbial life has been found in bedrock more than five kilometers below the surface of the Earth, and bacteria have been found on the deep ocean floor feeding on hydrogen and other gases rising from the interior of the Earth through vents in the ocean floor.
- The statements above, if true, best support which of the following as a conclusion?
- The location in the bedrock where microbial life was found was not near a system of volcanic vents through which hydrogen and other gases rose from the interior of the Earth.
 - Bacteria are able to exist at the molten center of the Earth.
 - A thorough survey of a planet's surface is insufficient to establish beyond a doubt that the planet contains no life.
 - Life probably exists on Sun-orbiting comets, which are cold agglomerations of space dust and frozen gases.
 - Finding bacterial remains in coal and oil would establish that the bacteria had been feeding on substances that had not been produced from the energy of sunlight.
7. 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
- work without interruption from other employees
 - consult at least once a day with employees from other companies
 - submit their work for a supervisor's eventual approval
 - interact frequently with each other throughout the entire workday
 - undertake projects that take several days to complete

8. 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.

9. 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.

10. 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 to be more effective than competing brands of painkillers that have been on the market longer than Novex.

11. 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.
12. 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.

13. Wood smoke contains dangerous toxins that cause changes in human cells. Because wood smoke 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 wood smoke 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.

14. 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.

15. 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.

16. In Swartkans territory, archaeologists discovered charred bone fragments dating back one 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 500,000 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.

17. 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.

18. 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.
19. 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
20. 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 10 years ago.
21. 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 housing than on all other purchases combined.

22. In Asia, where palm trees are nonnative, 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 50 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.

23. 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.

24. 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 evaluate the researcher's hypothesis?

- (A) Determining whether 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

25. 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.

26. 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.

27. 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.

28. 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.

Questions 29–30 are based on the following:

In many corporations, employees are being replaced by automated equipment in order to save money. However, many workers who lose their jobs to automation will need government assistance to survive, and the same corporations that are laying people off will eventually pay for that assistance through increased taxes and unemployment insurance payments.

29. The author is arguing that _____.
- higher taxes and unemployment insurance payments will discourage corporations from automating
 - replacing people through automation to reduce production costs will result in increases of other costs to corporations
 - many workers who lose their jobs to automation will have to be retrained for new jobs
 - corporations that are laying people off will eventually rehire many of them
 - corporations will not save money by automating because people will be needed to run the new machines
30. Which of the following, if true, most strengthens the author's argument?
- Many workers who have already lost their jobs to automation have been unable to find new jobs.
 - Many corporations that have failed to automate have seen their profits decline.
 - Taxes and unemployment insurance are also paid by corporations that are not automating.
 - Most of the new jobs created by automation pay less than the jobs eliminated by automation did.
 - The initial investment in machinery for automation is often greater than the short-term savings in labor costs.

31. When a polygraph test is judged inconclusive, this is no reflection on the examinee. Rather, such a judgment means that the test has failed to show whether the examinee was truthful or untruthful. Nevertheless, employers will sometimes refuse to hire a job applicant because of an inconclusive polygraph test result.

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

- Most examinees with inconclusive polygraph test results are in fact untruthful.
- Polygraph tests should not be used by employers in the consideration of job applicants.
- An inconclusive polygraph test result is sometimes unfairly held against the examinee.
- A polygraph test indicating that an examinee is untruthful can sometimes be mistaken.
- Some employers have refused to consider the results of polygraph tests when evaluating job applicants.

32. The technological conservatism of bicycle manufacturers is a reflection of the kinds of demand they are trying to meet. The only cyclists seriously interested in innovation and willing to pay for it are bicycle racers. Therefore, innovation in bicycle technology is limited by what authorities will accept as standard for purposes of competition in bicycle races.

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

- The market for cheap, traditional bicycles cannot expand unless the market for high-performance competition bicycles expands.
- High-performance bicycles are likely to be improved more as a result of technological innovations developed in small workshops than as a result of technological innovations developed in major manufacturing concerns.

- (C) Bicycle racers do not generate a strong demand for innovations that fall outside what is officially recognized as standard for purposes of competition.
- (D) The technological conservatism of bicycle manufacturers results primarily from their desire to manufacture a product that can be sold without being altered to suit different national markets.
- (E) The authorities who set standards for high-performance bicycle racing do not keep informed about innovative bicycle design.
33. Robot satellites relay important communications and identify weather patterns. Because the satellites can be repaired only in orbit, astronauts are needed to repair them. Without repairs, the satellites would eventually malfunction. Therefore, space flights carrying astronauts must continue.
- Which of the following, if true, would most seriously weaken the argument above?
- (A) Satellites falling from orbit because of malfunctions burn up in the atmosphere.
- (B) Although satellites are indispensable in the identification of weather patterns, weather forecasters also make some use of computer projections to identify weather patterns.
- (C) The government, responding to public pressure, has decided to cut the budget for space flights and put more money into social welfare programs.
- (D) Repair of satellites requires heavy equipment, which adds to the amount of fuel needed to lift a spaceship carrying astronauts into orbit.
- (E) Technical obsolescence of robot satellites makes repairing them more costly and less practical than sending new, improved satellites into orbit.

34. A company's two divisions performed with remarkable consistency over the past three years: in each of those years, the pharmaceuticals division has accounted for roughly 20 percent of dollar sales and 40 percent of profits, and the chemicals division for the balance.
- Regarding the past three years, which of the following can properly be inferred from the statement above?
- (A) Total dollar sales for each of the company's divisions have remained roughly constant.
- (B) The pharmaceuticals division has faced stiffer competition in its markets than has the chemicals division.
- (C) The chemicals division has realized lower profits per dollar of sales than has the pharmaceuticals division.
- (D) The product mix offered by each of the company's divisions has remained unchanged.
- (E) Highly profitable products accounted for a higher percentage of the chemicals division's sales than of the pharmaceuticals division's.
35. Advertisement: Today's customers expect high quality. Every advance in the quality of manufactured products raises customer expectations. The company that is satisfied with the current quality of its products will soon find that its customers are not. At MegaCorp, meeting or exceeding customer expectations is our goal.
- Which of the following must be true on the basis of the statements in the advertisement above?
- (A) MegaCorp's competitors will succeed in attracting customers only if those competitors adopt MegaCorp's goal as their own.
- (B) A company that does not correctly anticipate the expectations of its customers is certain to fail in advancing the quality of its products.
- (C) MegaCorp's goal is possible to meet only if continuing advances in product quality are possible.
- (D) If a company becomes satisfied with the quality of its products, then the quality of its products is sure to decline.
- (E) MegaCorp's customers are currently satisfied with the quality of its products.

36. 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.

Questions 37–38 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.

37. 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.

38. 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.

39. Last year the rate of inflation was 1.2 percent, but during 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 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 10-year low.
- (E) Government intervention cannot affect the rate of inflation to any significant degree.

40. Offshore oil-drilling operations entail an unavoidable risk of an oil spill, but importing oil on tankers presently entails an even greater such risk per barrel of oil. Therefore, if we are to reduce the risk of an oil spill without curtailing our use of oil, we must invest more in offshore operations and import less oil on tankers.

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

- (A) Tankers can easily be redesigned so that their use entails less risk of an oil spill.
- (B) Oil spills caused by tankers have generally been more serious than those caused by offshore operations.
- (C) The impact of offshore operations on the environment can be controlled by careful management.
- (D) Offshore operations usually damage the ocean floor, but tankers rarely cause such damage.
- (E) Importing oil on tankers is currently less expensive than drilling for it offshore.

41. Manufacturers of mechanical pencils make most of their profit on pencil leads rather than on the pencils themselves. The Write Company, which cannot sell its leads as cheaply as other manufacturers can, plans to alter the design of its mechanical pencil so that it will accept only a newly designed Write Company lead, which will be sold at the same price as the Write Company's current lead.

Which of the following, if true, most strongly supports the Write Company's projection that its plan will lead to an increase in its sales of pencil leads?

- (A) First-time buyers of mechanical pencils tend to buy the least expensive mechanical pencils available.
- (B) Annual sales of mechanical pencils are expected to triple over the next five years.
- (C) A Write Company executive is studying ways to reduce the cost of manufacturing pencil leads.

- (D) A rival manufacturer recently announced similar plans to introduce a mechanical pencil that would accept only the leads produced by that manufacturer.

- (E) In extensive test marketing, mechanical-pencil users found the new Write Company pencil markedly superior to other mechanical pencils they had used.

42. Mourdet Winery: Danville Winery's new wine was introduced to compete with our most popular wine, which is sold in a distinctive tall, black bottle. Danville uses a similar bottle. Thus, it is likely that many customers intending to buy our wine will mistakenly buy theirs instead.

Danville Winery: Not so. The two bottles can be readily distinguished: the label on ours, but not on theirs, is gold colored.

Which of the following, if true, most undermines Danville Winery's response?

- (A) Gold is the background color on the label of many of the wines produced by Danville Winery.
- (B) When the bottles are viewed side by side, Danville Winery's bottle is perceptibly taller than Mourdet Winery's.
- (C) Danville Winery, unlike Mourdet Winery, displays its wine's label prominently in advertisements.
- (D) It is common for occasional purchasers to buy a bottle of wine on the basis of a general impression of the most obvious feature of the bottle.
- (E) Many popular wines are sold in bottles of a standard design.

43. 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 quite small, because _____.

- (A) many users who illegally copy programs never find any use for them
- (B) most people who illegally copy programs would not purchase them 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

44. In the last decade there has been a significant decrease in coffee consumption. During this same time, there has been increasing publicity about the caffeine in coffee's adverse long-term effects on health. Therefore, the decrease in coffee consumption must have been caused by consumers' awareness of the harmful effects of caffeine.

Which of the following, if true, most seriously calls into question the explanation above?

- (A) On average, people consume 30 percent less coffee today than they did 10 years ago.
- (B) Heavy coffee drinkers may have mild withdrawal symptoms, such as headaches, for a day or so after significantly decreasing their coffee consumption.
- (C) Sales of specialty types of coffee have held steady as sales of regular brands have declined.
- (D) The consumption of fruit juices and caffeine-free herbal teas has increased over the past decade.

- (E) Coffee prices increased steadily in the past decade because of unusually severe frosts in coffee-growing nations.

45. Fewer families lose their houses because of major disasters such as fire or flood than because of a wage earner's illness that results in death or disability. Yet, whereas most mortgage companies require borrowers to carry insurance to protect against major disasters, they do not require insurance to protect against the death or disability of a wage earner.

Which of the following, if true, would contribute most to an explanation of the difference in insurance requirements?

- (A) Some people are less aware of tragedies caused by major disasters than of those caused by the death or disability of a wage earner.
- (B) Many people are made uncomfortable by having to consider the possibility of their own death or disability or that of a family member.
- (C) Few wage earners are insured by their employers against a temporary loss of income resulting from disability.
- (D) The value of a property to a mortgage company is not affected by the death or disability of a wage earner.
- (E) Insuring against major disasters can be more costly than insuring against death or disability.

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

When the products of several competing suppliers are perceived by consumers to be essentially the same, classical economics predicts that price competition will reduce prices to the same minimal levels and all suppliers' profits to the same minimal levels. Therefore, if classical economics is true, and given suppliers' desire to make as much profit as possible, it should be expected that _____.

- (A) in a crowded market widely differing prices will be charged for products that are essentially the same as each other

- (B) as a market becomes less crowded as suppliers leave, the profits of the remaining suppliers will tend to decrease
- (C) each supplier in a crowded market will try to convince consumers that its product differs significantly from its competitors' products.
- (D) when consumers are unable to distinguish among the products in a crowded market, consumers will judge that the higher-priced products are of higher quality
- (E) suppliers in crowded markets will have more incentive to reduce prices and thus increase sales than to introduce innovations that would distinguish their product from their competitors' products
47. 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 smokestacks of its plants, the activities of Northern Power do not cause significant air pollution.
48. 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, non-forager 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.

49. 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 10 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 more than 20 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.

50. 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.
51. Biometric access-control systems—those using fingerprints, voiceprints, and so forth, 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) No biometric 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.

52. 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 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.

53. 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 non-biodegradable 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 partially biodegradable plastic beverage containers rather than in nonbiodegradable containers, even if the price is higher.
- (D) The manufacturing process for partially biodegradable plastic beverage containers results in less plastic waste than the manufacturing process for non-biodegradable 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.

54. 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.

55. 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 20 years, reducing the money that low-income families have available to spend on child care.

56. Social scientists are underrepresented on the advisory councils of the National Institutes of Health (NIH). Since these councils advise NIH directors and recommend policy, the underrepresentation of social scientists results in a relative lack of NIH financial support for research in the social sciences.

If the statements above are correct, they most strongly support which of the following?

- (A) A significant increase in the size of NIH advisory councils would be required in order to increase the representation of social scientists on these councils.
- (B) A significant increase in the representation of social scientists on NIH advisory councils would result in an increase in NIH funding for social science research.
- (C) A significant increase in funding for social science research would result in improved policy recommendations to NIH directors.
- (D) A significant increase in funding for the training of social scientists would result in an increase in the number of social scientists on NIH advisory councils.
- (E) A significant increase in the representation of social scientists on NIH advisory councils would have to precede any increase in the number of NIH directors who are social scientists.

57. 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 excerption 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.

58. 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

59. 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.

Questions 60–61 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 the 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.

60. 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.
61. 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 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.

62. 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

63. 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.

64. 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.

65. Most consumers do not get much use out of the sports equipment they purchase. For example, 17 percent of the adults in the United States own jogging shoes, but only 45 percent of the owners jog more than once a year, and only 17 percent jog more than once a week.

Which of the following, if true, casts the 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) In surveys designed to elicit such information, joggers often exaggerate the frequency with which they jog.
- (C) Many consumers purchase jogging shoes for use in activities other than jogging.
- (D) Consumers who take up jogging often purchase athletic shoes 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.
66. 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

67. 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.

68. 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?

69. 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 AD 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 AD 365 were also found in several graves near Kourion.
- (B) No coins minted after AD 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 AD 365.
- (D) Several small statues carved in styles current in Cyprus in the century between AD 300 and 400 were found in Kourion.
- (E) Stone inscriptions in a form of the Greek alphabet that was definitely used in Cyprus after AD 365 were found in Kourion.

Questions 70–71 are based on the following:

To protect certain fledgling industries, the government of Country Z banned imports of the types of products those industries were starting to make. As a direct result, the cost of those products to the buyers, several export-dependent industries in Z, went up, sharply limiting the ability of those industries to compete effectively in their export markets.

70. Which of the following can be most properly inferred from the passage about the products whose importation was banned?
- (A) Those products had been cheaper to import than they were to make within Country Z's fledgling industries.
 - (B) Those products were ones that Country Z was hoping to export in its turn, once the fledgling industries matured.

- (C) Those products used to be imported from just those countries to which Country Z's exports went.
- (D) Those products had become more and more expensive to import, which resulted in a foreign trade deficit just before the ban.
- (E) Those products used to be imported in very small quantities, but they were essential to Country Z's economy.

71. Which of the following conclusions about Country Z's adversely affected export-dependent industries is best supported by the passage?

- (A) Profit margins in those industries were not high enough to absorb the rise in costs mentioned above.
- (B) Those industries had to contend with the fact that other countries banned imports from Country Z.
- (C) Those industries succeeded in expanding the domestic market for their products.
- (D) Steps to offset rising materials costs by decreasing labor costs were taken in those industries.
- (E) Those industries started to move into export markets that they had previously judged unprofitable.

72. Biological functions of many plants and animals vary in cycles that are repeated every 24 hours. It is tempting to suppose that alteration in the intensity of incident light is the stimulus that controls these daily biological rhythms. But there is much evidence to contradict this hypothesis.

Which of the following, if known, is evidence that contradicts the hypothesis stated in lines 2–5 above?

- (A) Human body temperature varies throughout the day, with the maximum occurring in the late afternoon and the minimum in the morning.
- (B) While some animals, such as the robin, are more active during the day, others, such as mice, show greater activity at night.
- (C) When people move from one time zone to another, their daily biological rhythms adjust in a matter of days to the periods of sunlight and darkness in the new zone.

- (D) Certain single-cell plants display daily biological rhythms even when the part of the cell containing the nucleus is removed.
- (E) Even when exposed to constant light intensity around the clock, some algae display rates of photosynthesis that are much greater during daylight hours than at night.
73. 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.
74. 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.
75. 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.

Questions 76–77 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 one out of 20 workers unemployed. So at any given time if a person knows approximately 50 workers, one or more will very likely be unemployed.

76. Sharon's argument is structured to lead to which of the following as a conclusion?
- The fact that 90 percent of the people know someone who is unemployed is not an indication that unemployment is abnormally high.
 - The current level of unemployment is not moderate.
 - If at least 5 percent of workers are unemployed, the result of questioning a representative group of people cannot be the percentage Roland cites.
 - It is unlikely that the people whose statements Roland cites are giving accurate reports.
 - If an unemployment figure is given as a certain percentage, the actual percentage of those without jobs is even higher.
77. Sharon's argument relies on the assumption that ____.
- normal levels of unemployment are rarely exceeded
 - unemployment is not normally concentrated in geographically isolated segments of the population
 - the number of people who each know someone who is unemployed is always higher than 90 percent of the population
 - Roland is not consciously distorting the statistics he presents
 - knowledge that a personal acquaintance is unemployed generates more fear of losing one's job than does knowledge of unemployment statistics

78. 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?

- 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.
- EFCO keyboards are no more expensive to manufacture than are standard keyboards and require less frequent repair than do standard keyboards.
- The number of businesses and government agencies that use EFCO keyboards is increasing each year.
- 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.
- Novice typists can learn to use the EFCO keyboard in about the same amount of time that it takes them to learn to use the standard keyboard.

79. 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?

- Industrial production also is declining in Country X.
- 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.

80. 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

81. A recent report determined that although only 3 percent of drivers on Maryland highways equipped their vehicles with radar detectors, 33 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.

82. Products sold under a brand name used to command premium prices because, in general, they were superior to nonbrand rival products. Technical expertise in product development has become so widespread, however, that special quality advantages are very hard to obtain these days and even harder to maintain. As a consequence, brand-name products generally neither offer higher quality nor sell at higher prices. Paradoxically, brand names are a bigger marketing advantage than ever.

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

- (A) Brand names are taken by consumers as a guarantee of getting a product as good as the best rival products.
- (B) Consumers recognize that the quality of products sold under invariant brand names can drift over time.
- (C) In many acquisitions of one corporation by another, the acquiring corporation is interested more in acquiring the right to use certain brand names than in acquiring existing production facilities.
- (D) In the days when special quality advantages were easier to obtain than they are now, it was also easier to get new brand names established.
- (E) The advertising of a company's brand-name products is at times transferred to a new advertising agency, especially when sales are declining.

83. Editorial: Regulations recently imposed by the government of Risemia call for unprecedented reductions in the amounts of pollutants manufacturers are allowed to discharge into the environment. It will take costly new pollution control equipment requiring expensive maintenance to comply with these regulations. Resultant price increases for Risemian manufactured goods will lead to the loss of some export markets. Clearly, therefore, annual exports of Risemian manufactured goods will in the future occur at diminished levels.

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

- (A) The need to comply with the new regulations will stimulate the development within Risemia of new pollution control equipment for which a strong worldwide demand is likely to emerge.
- (B) The proposed regulations include a schedule of fines for noncompliance that escalate steeply in cases of repeated noncompliance.
- (C) Savings from utilizing the chemicals captured by the pollution control equipment will remain far below the cost of maintaining the equipment.
- (D) By international standards, the levels of pollutants currently emitted by some of Risemia's manufacturing plants are not considered excessive.
- (E) The stockholders of most of Risemia's manufacturing corporations exert substantial pressure on the corporations to comply with environmental laws.

84. When demand for a factory's products is high, more money is spent at the factory for safety precautions and machinery maintenance than when demand is low. Thus the average number of on-the-job accidents per employee each month should be lower during periods when demand is high than when demand is low and less money is available for safety precautions and machinery maintenance.

Which of the following, if true about a factory when demand for its products is high, casts the most serious doubt on the conclusion drawn above?

- (A) Its employees ask for higher wages than they do at other times.
- (B) Its management hires new workers but lacks the time to train them properly.
- (C) Its employees are less likely to lose their jobs than they are at other times.
- (D) Its management sponsors a monthly safety award for each division in the factory.
- (E) Its old machinery is replaced with modern, automated models.

85. An unusually severe winter occurred in Europe after the continent was blanketed by a blue haze resulting from the eruption of the Laki Volcano in the European republic of Iceland in the summer of 1984. Thus, it is evident that major eruptions cause the atmosphere to become cooler than it would be otherwise.

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

- (A) The cooling effect triggered by volcanic eruptions in 1985 was counteracted by an unusual warming of Pacific waters.
- (B) There is a strong statistical link between volcanic eruptions and the severity of the rainy season in India.
- (C) A few months after El Chichón's large eruption in April 1982, air temperatures throughout the region remained higher than expected, given the long-term weather trends.
- (D) The climatic effects of major volcanic eruptions can temporarily mask the general warming trend resulting from an excess of carbon dioxide in the atmosphere.
- (E) Three months after an early springtime eruption in South America during the late nineteenth century, sea surface temperatures near the coast began to fall.

86. Journalist: In physics journals, the number of articles reporting the results of experiments involving particle accelerators was lower last year than it had been in previous years. Several of the particle accelerators at major research institutions were out of service the year before last for repairs, so it is likely that the low number of articles was due to the decline in availability of particle accelerators.

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

- (A) Every article based on experiments with particle accelerators that was submitted for publication last year actually was published.
- (B) The average time scientists must wait for access to a particle accelerator has declined over the last several years.
- (C) The number of physics journals was the same last year as in previous years.
- (D) Particle accelerators can be used for more than one group of experiments in any given year.
- (E) Recent changes in the editorial policies of several physics journals have decreased the likelihood that articles concerning particle-accelerator research will be accepted for publication.

Questions 87–89 are based on the following:

Networks of blood vessels in bats' wings serve only to disperse heat generated in flight. This heat is generated only because bats flap their wings. Thus paleontologists' recent discovery that the winged dinosaur Sandactylus had similar networks of blood vessels in the skin of its wings provides evidence for the hypothesis that Sandactylus flew by flapping its wings, not just by gliding.

87. In the passage, the author develops the argument by
- (A) forming the hypothesis that best explains several apparently conflicting pieces of evidence
 - (B) reinterpreting evidence that had been used to support an earlier theory
 - (C) using an analogy with a known phenomenon to draw a conclusion about an unknown phenomenon
 - (D) speculating about how structures observed in present-day creatures might have developed from similar structures in creatures now extinct
 - (E) pointing out differences in the physiological demands that flight makes on large, as opposed to small, creatures

88. Which of the following, if true, most seriously weakens the argument in the passage?

- (A) Sandactylus' wings were far more similar to the wings of bats than to the wings of birds.
- (B) Paleontologists do not know whether winged dinosaurs other than Sandactylus had similar networks of blood vessels in the skin of their wings.
- (C) The mechanism used by bats for dispersing heat in flight could, in principle, work for much larger flying creatures, such as Sandactylus.
- (D) Not all the bats that use the mechanism described in the passage for dispersing heat in flight live in climates similar to the climate in which Sandactylus lived.
- (E) Other winged dinosaurs that flew only by gliding had networks of blood vessels in the skin of their wings similar to those that Sandactylus had.

89. The argument in the passage relies on which of the following assumptions?

- (A) Sandactylus would not have had networks of blood vessels in the skin of its wings if these networks were of no use to Sandactylus.
- (B) All creatures that fly by flapping their wings have networks of blood vessels in the skin of their wings.
- (C) Winged dinosaurs that flapped their wings in flight would have been able to fly more effectively than winged dinosaurs that could only glide.
- (D) If Sandactylus flew by flapping its wings, then paleontologists would certainly be able to find some evidence that it did so.
- (E) Heat generated by Sandactylus in flapping its wings in flight could not have been dispersed by anything other than the blood vessels in its wings.

90. Keith: Compliance with new government regulations requiring the installation of smoke alarms and sprinkler systems in all theaters and arenas will cost the entertainment industry \$25 billion annually. Consequently, jobs will be lost and profits diminished. Therefore, these regulations will harm the country's economy.

Laura: The \$25 billion spent by some businesses will be revenue for others. Jobs and profits will be gained as well as lost.

Laura responds to Keith by _____.

- (A) demonstrating that Keith's conclusion is based on evidence that is not relevant to the issue at hand
- (B) challenging the plausibility of the evidence that serves as the basis for Keith's argument.
- (C) suggesting that Keith's argument overlooks a mitigating consequence
- (D) reinforcing Keith's conclusion by supplying a complementary interpretation of the evidence Keith cites
- (E) agreeing with the main conclusion of Keith's argument but construing that conclusion as grounds for optimism rather than for pessimism

91. Businesses are suffering because of a lack of money available for development loans. To help businesses, the government plans to modify the income-tax structure in order to induce individual taxpayers to put a larger portion of their incomes into retirement savings accounts, because as more money is deposited in such accounts, more money becomes available to borrowers.

Which of the following, if true, raises the most serious doubt regarding the effectiveness of the government's plan to increase the amount of money available for development loans for businesses?

- (A) When levels of personal retirement savings increase, consumer borrowing always increases correspondingly.
- (B) The increased tax revenue the government would receive as a result of business expansion would not offset the loss in revenue from personal income taxes during the first year of the plan.

- (C) Even with tax incentives, some people will choose not to increase their levels of retirement savings.
- (D) Bankers generally will not continue to lend money to businesses whose prospective earnings are insufficient to meet their loan repayment schedules.
- (E) The modified tax structure would give all taxpayers, regardless of their incomes, the same tax savings for a given increase in their retirement savings.

92. In order to finance road repairs, the highway commission of a certain state is considering a 50 percent increase in the 10-cents-per-mile toll for vehicles using its toll highway. The highway commissioner claims that the toll increase will increase the annual revenue generated by the toll highway by at least 50 percent per year.

Which of the following is an assumption on which the highway commissioner's claim depends?

- (A) The amount of money required annually for road repairs will not increase from its current level.
- (B) The total number of trips made on the toll highway per year will not decrease from its current level.
- (C) The average length of a trip made on the toll highway will not decrease from its current level.
- (D) The number of drivers who consistently avoid the highway tolls by using secondary roads will not increase from its current level.
- (E) The total distance traveled by vehicles on the toll highway per year will not decrease from its current level.

93. 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 the 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.

Questions 94–95 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.

94. 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

95. 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 by 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.

96. 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.

97. 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.

98. 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

99. 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.

100. 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.
101. 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.

Questions 102–103 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.

102. 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 Louisianan'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 Louisianans 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.
103. 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 Louisianans who move to Hawaii live longer than 77 years.
- (D) Over the last decade, average life expectancy has risen at a higher rate for Louisianans 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.

104. The cost of producing radios in Country Q is 10 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 10 percent below those in Country Y.
- (B) Importing radios from Country Q to Country Y will eliminate 10 percent of the manufacturing jobs in Country Y.
- (C) The tariff on a radio imported from Country Q to Country Y is less than 10 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 10 percent of the cost of manufacturing the radio in Country Q.
- (E) It takes 10 percent less time to manufacture a radio in Country Q than it does in Country Y.

105. The average normal infant born in the United States weighs between 12 and 14 pounds at the age of three months. Therefore, if a three-month-old child weighs only 10 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 17 pounds.
- (C) It is possible for a normal child to weigh 10 pounds at birth.
- (D) The phrase "below average" does not necessarily mean insufficient.
- (E) Average weight gain is not the same as average weight.

106. 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

107. 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.

108. 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

109. 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.

110. "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 ensures 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 a production cycle
- (E) "fast cycle time" is a concept in business strategy that has not yet been put into practice in a factory

111. 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 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.

112. 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.

113. The difficulty with the proposed high-speed train line is that a used plane can be bought for one-third the price of the train line, and the plane, which is just as fast, can fly anywhere. The train would be a fixed linear system, and we live in a world that is spreading out in all directions and in which consumers choose the free-wheel systems (cars, buses, aircraft), which do not have fixed routes. Thus a sufficient market for the train will not exist.

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

- (A) Cars, buses, and planes require the efforts of drivers and pilots to guide them, whereas the train will be guided mechanically.
- (B) Cars and buses are not nearly as fast as the high-speed train will be.
- (C) Planes are not a free-wheel system because they can fly only between airports, which are less convenient for consumers than the high-speed train's stations would be.
- (D) The high-speed train line cannot use currently underutilized train stations in large cities.
- (E) For long trips, most people prefer to fly rather than to take ground-level transportation.

Questions 114–115 are based on the following:

According to the Tristate Transportation Authority, making certain improvements to the main commuter rail line would increase ridership dramatically. The authority plans to finance these improvements over the course of five years by raising automobile tolls on the two highway bridges along the route the rail line serves. Although the proposed improvements are indeed needed, the authority's plan for securing the necessary funds should be rejected because it would unfairly force drivers to absorb the entire cost of something from which they receive no benefit.

114. Which of the following, if true, would cast the most doubt on the effectiveness of the authority's plan to finance the proposed improvements by increasing bridge tolls?

- (A) Before the authority increases tolls on any of the area bridges, it is required by law to hold public hearings at which objections to the proposed increase can be raised.
- (B) Whenever bridge tolls are increased, the authority must pay a private contractor to adjust the automated toll-collecting machines.
- (C) Between the time a proposed toll increase is announced and the time the increase is actually put into effect, many commuters buy more tokens than usual to postpone the effects of the increase.
- (D) When tolls were last increased on the two bridges in question, almost 20 percent of the regular commuter traffic switched to a slightly longer alternative route that has since been improved.
- (E) The chairman of the authority is a member of the Tristate Automobile Club, which has registered strong opposition to the proposed toll increase.

115. Which of the following, if true, would provide the authority with the strongest counter to the objection that its plan is unfair?

- (A) Even with the proposed toll increase, the average bridge toll in the tristate region would remain less than the tolls charged in neighboring states.
- (B) Any attempt to finance the improvements by raising rail fares would result in a decrease in ridership and so would be self-defeating.
- (C) Automobile commuters benefit from well-maintained bridges, and in the tristate region bridge maintenance is funded out of general income tax revenues to which both automobile and rail commuters contribute.
- (D) The roads along the route served by the rail line are highly congested and drivers benefit when commuters are diverted from congested roadways to mass transit.

(E) The only alternative way of funding the proposed improvements now being considered is through a regional income tax surcharge, which would affect automobile commuters and rail commuters alike.

116. 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.

117. 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.

118. 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 metalworking 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.

119. 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.

120. The proposal to hire 10 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.
121. Northern Air has dozens of flights daily into and out of Belleville Airport, which is highly congested. Northern Air depends for its success on economy and quick turnaround and consequently is planning to replace its large planes with Skybuses, the novel aerodynamic design of which is extremely fuel efficient. The Skybus' fuel efficiency results in both lower fuel costs and reduced time spent refueling.
- Which of the following, if true, could present the most serious disadvantage for Northern Air in replacing its large planes with Skybuses?
- (A) The Skybus would enable Northern Air to schedule direct flights to destinations that currently require stops for refueling.
- (B) Aviation fuel is projected to decline in price over the next several years.
- (C) The fuel efficiency of the Skybus would enable Northern Air to eliminate refueling at some of its destinations, but several mechanics would lose their jobs.
- (D) None of Northern Air's competitors that use Belleville Airport are considering buying Skybuses.
- (E) The aerodynamic design of the Skybus causes turbulence behind it when taking off that forces other planes on the runway to delay their takeoffs.

122. The earliest Mayan pottery found at Colha, in Belize, is about 3,000 years old. Recently, however, 4,500-year-old stone agricultural implements were unearthed at Colha. These implements resemble Mayan stone implements of a much later period, also found at Colha. Moreover, the implements' designs are strikingly different from the designs of stone implements produced by other cultures known to have inhabited the area in prehistoric times. Therefore, there were surely Mayan settlements in Colha 4,500 years ago.

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

- (A) Ceramic ware is not known to have been used by the Mayan people to make agricultural implements.
- (B) Carbon dating of corn pollen in Colha indicates that agriculture began there around 4,500 years ago.
- (C) Archaeological evidence indicates that some of the oldest stone implements found at Colha were used to cut away vegetation after controlled burning of trees to open areas of swampland for cultivation.
- (D) Successor cultures at a given site often adopt the style of agricultural implements used by earlier inhabitants of the same site.
- (E) Many religious and social institutions of the Mayan people who inhabited Colha 3,000 years ago relied on a highly developed system of agricultural symbols.