

CRITICAL REASONING TEST SECTION 10**30 Minutes 20 Questions**

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

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

- (A) Barbera's farmers produced much more cabbage than did Alissia's farmers.
 - (B) Barbera's farmers produced fewer heads of broccoli per acre than did Alissia's farmers.
 - (C) Alissia exported a much higher proportion of its broccoli crop than did Barbera.
 - (D) Broccoli was much more popular among consumers in Alissia than in Barbera.
 - (E) Alissia had more land suitable for growing broccoli than did Barbera.
2. A manufacturer of men's dress socks sought to increase profits by increasing sales. The size of its customer pool was remaining steady, with the average customer buying twelve pairs of dress socks per year. The company's plan was to increase the number of promotional discount-sale periods to one every six months.
- Which of the following, if it is a realistic possibility, casts the most serious doubt on the viability of the company's plan?
- (A) New manufacturing capacity would not be required if the company were to increase the number of pairs of socks sold.
 - (B) Inventory stocks of merchandise ready for sale would be high preceding the increase in the number of discount-sale periods.
 - (C) The manufacturer's competitors would match its discounts during sale periods, and its customers would learn to wait for those times to make their purchases.
 - (D) New styles and colors would increase customers' consciousness of fashion in dress socks, but the customers' requirements for older styles and colors would not be reduced.
 - (E) The cost of the manufacturer's raw materials would remain steady, and its customers would have more disposable income.

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

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

- (A) Most people who eat a great deal of chocolate will not get heart disease.
 - (B) Although they believe that eating chocolate increases the likelihood of getting heart disease, some people still eat as much chocolate as they want.
 - (C) People who have heard that eating chocolate increases the likelihood of getting heart disease do not believe it.
 - (D) There are people who currently eat as much chocolate as they want because they have not heard that eating chocolate increases the likelihood of getting heart disease.
 - (E) There are people who currently limit their consumption of chocolate only because they believe that eating chocolate increases the likelihood of getting heart disease.
4. The fossil record shows that the climate of North America warmed and dried at the end of the Pleistocene period. Most of the species of large mammals then living on the continent became extinct, but the smaller mammalian species survived.

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

- (A) Individual large mammals can, in general, travel further than small mammals and so are more able to migrate in search of a hospitable environment.
- (B) The same pattern of comparative success in smaller, as opposed to larger, species that is observed in mammals is also found in bird species of the same period.
- (C) The fossil record from the end of Pleistocene period is as clear for small mammals as it is for large mammals.

- (D) Larger mammals have greater food and space requirements than smaller mammals and are thus less able to withstand environmental change.
- (E) Many more of the species of larger mammals than of the species of smaller mammals living in North America in that period had originated in climates that were warmer than was that of North America before the end of the Pleistocene period.

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

The conclusion above depends on the assumption that

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

Questions 6-7 are based on the following.

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

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

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

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

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

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

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

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

- (A) The real-estate tax rate in Middletown is higher than it is in the suburbs.
 - (B) Last year voters in the suburban communities defeated by a narrow margin a bill designed to increase subsidies for public bus routes.
 - (C) Many suburban shops can attract enough employees to remain in business only because subsidized public transportation from Middletown is available.
 - (D) Public buses operated with less than a 35 percent occupancy rate produce more pollution per passenger mile than would the operation of private automobiles for each passenger.
 - (E) Most voters in Middletown's suburban communities are unwilling to continue subsidies for public buses next year if ridership on those buses drops below current levels.
10. Any tax relief received by the solar industry would not benefit the homeowner who installs a solar-energy system. Even though homeowners would pay a lower price for solar-energy system installations because of this tax relief, with the government paying the balance, government revenues come from the public.

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

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

- (D) Homeowners generally believe that they benefit from any tax relief offered to the solar-energy industry.
- (E) Tax relief would encourage solar industries to sell solar-energy systems at higher prices.

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

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

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

12. A study comparing a group of chronically depressed individuals with an otherwise matched group of individuals free from depression found significantly more disorders of the immune system among the depressed group. According to the researchers, these results strongly support the hypothesis that mental states influence the body's vulnerability to infection.

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

- (A) The researchers' view does little more than echo a familiar theme in folklore and literature.
 - (B) Chronically depressed individuals are no less careful than others to avoid exposure to infections.
 - (C) Disorders of the immune system cause many of those individuals who have them to become chronically depressed.
 - (D) Individuals who have previously been free from depression can become depressed quite suddenly.
 - (E) A high frequency of infections can stem from an unusually high level of exposure rather than from any disorder of the immune system.
13. Exports of United States wood pulp will rise considerably during this year. The reason for the rise is that the falling value of the dollar will make it cheaper for paper manufacturers in Japan and Western Europe to buy American wood pulp than to get it from any other source.
- Which of the following is an assumption made in drawing the conclusion above?
- (A) Factory output of paper products in Japan and Western Europe will increase sharply during this year.
 - (B) The quality of the wood pulp produced in the United States would be adequate for the purposes of Japanese and Western European paper manufacturers.
 - (C) Paper manufacturers in Japan and Western Europe would prefer to use wood pulp produced in the United States if cost were not a factor.
 - (D) Demand for paper products made in Japan and Western Europe will not increase sharply during this year.
 - (E) Production of wood pulp by United States companies will not increase sharply during this year.

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

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

- (A) No other performance rating system is as good as the current system.
 - (B) The company's best-performing employees received high ratings.
 - (C) Employees who received low ratings were dissatisfied with the system.
 - (D) Employees who receive high ratings from a performance-rating system will like that system.
 - (E) The company's best-performing employees were motivated to perform well by the knowledge that they would receive performance ratings.
15. In Argonia the average rate drivers pay for car accident insurance is regulated to allow insurance companies to make a reasonable profit. Under the regulations, the rate any individual driver pays never depends on the actual distance driven by that driver each year. Therefore, Argonians who drive less than average partially subsidize the insurance of those who drive more than average.
- The conclusion above would be properly drawn if it were also true that in Argonia
- (A) the average accident insurance rate for all drivers rises whenever a substantial number of new drivers buy insurance
 - (B) the average cost to insurance companies of insuring drivers who drive less than the annual average is less than the average cost of insuring drivers who drive more than the annual average
 - (C) the lower the age of a driver, the higher the insurance rate paid by that driver
 - (D) insurance company profits would rise substantially if drivers were classified in terms of the actual number of miles they drive each year
 - (E) drivers who have caused insurance companies to pay costly claims generally pay insurance rates that are equal to or lower than those paid by other drivers

16. In the 1970's there was an oversupply of college graduates. The oversupply caused the average annual income of college graduates to fall to a level only 18 percent greater than that of workers with only high school diplomas. By the late 1980's the average annual income of college graduates was 43 percent higher than that of workers with only high school diplomas, even though between the 1970's and the late 1980's the supply of college graduates did not decrease.

Which of the following, if true in the late 1980's, best reconciles the apparent discrepancy described above?

- (A) The economy slowed, thus creating a decreased demand for college graduates.
 - (B) The quality of high school education improved.
 - (C) Compared to the 1970's, a greater number of high schools offered vocational guidance programs for their students.
 - (D) The proportion of the population with at least a college-level education increased.
 - (E) There was for the first time in 20 years an oversupply of job seekers with only high school diplomas.
17. Working shorter workweeks causes managers to feel less stress than does working longer workweeks. In addition, greater perceived control over one's work life reduces stress levels. It can be concluded, therefore, that shorter workweeks cause managers to feel they have more control over their work life.

The argument made above uses which of the following questionable techniques?

- (A) Associating two conditions as cause and effect on the basis of their being causally associated with the same phenomenon
- (B) Taking for granted that two factors that have a certain effect individually produce that effect more strongly when both act together.
- (C) Assuming what it sets out to prove
- (D) Using an irrelevant point in order to draw a conclusion
- (E) Basing a conclusion on preconceived views about the needs of managers

18. There are fundamentally two possible changes in an economy that will each cause inflation unless other compensating changes also occur. These changes are either reductions in the supply of goods and services or increases in demand. In a prebanking economy the quantity of money available, and hence the level of demand, is equivalent to the quantity of gold available.

If the statements above are true, then it is also true that in a prebanking economy

- (A) any inflation is the result of reductions in the supply of goods and services
 - (B) if other factors in the economy are unchanged, increasing the quantity of gold available will lead to inflation
 - (C) if there is a reduction in the quantity of gold available, then, other things being equal, inflation must result
 - (D) the quantity of goods and services purchasable by a given amount of gold is constant
 - (E) whatever changes in demand occur, there will be compensating changes in the supply of goods and services
19. Industrialists from the country Distopia were accused of promoting the Distopian intervention in the Arcadian civil war merely to insure that the industrialists' facilities in Arcadia made substantial profits during the war. Yet this cannot be the motive since, as the Distopians foresaw, Distopia's federal expenses for the intervention were eight billion dollars, whereas, during the war, profits from the Distopian industrialists' facilities in Arcadia totaled only four billion dollars.
- Which of the following, if true, exposes a serious flaw in the argument made in the second sentence above?
- (A) During the Arcadian war, many Distopian industrialists with facilities located in Arcadia experienced a significant rise in productivity in their facilities located in Distopia
 - (B) The largest proportion of Distopia's federal expenses is borne by those who receive no significant industrial profits.
 - (C) Most Distopian industrialists' facilities located in Arcadia are expected to maintain the level of profits they achieved during the war.

- (D) Distopian industrialists' facilities in Arcadia made substantial profits before the events that triggered the civil war.
- (E) Many Distopians expressed concern over the suffering that Arcadians underwent during the civil war.

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

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

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

CRITICAL REASONING TEST SECTION 11**30 Minutes 20 Questions**

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

The school board's plan assumes that

- (A) there is a way of determining the effectiveness of teachers
 - (B) what one individual defines as effective teaching will not be defined as effective teaching by another individual
 - (C) those with the most experience teaching are the best teachers
 - (D) those teachers who are paid the most are generally the most qualified
 - (E) some teachers will be more effective working with some students than with other students
2. Since applied scientific research is required for technological advancement, many have rightly urged an increased emphasis in universities on applied research. But we must not give too little attention to basic research, even though it may have no foreseeable application, for tomorrow's applied research will depend on the basic research of today.
- If the statements above are true, which of the following can be most reliably inferred?
- (A) If future technological advancement is desired, basic research should receive greater emphasis than applied research.
 - (B) If basic research is valued in universities, applied research should be given less emphasis than it currently has.
 - (C) If future technological advancement is desired, research should be limited to that with some foreseeable application.
 - (D) If too little attention is given to basic research today, future technological advancement will be jeopardized.
 - (E) If technological advancement is given insufficient emphasis, basic research will also receive too little attention.

3. The First Banking Group's decision to invest in an electronic network for transferring funds was based on a cost advantage over a nonelectronic system of about ten dollars per transaction in using an electronic system. Executives reasoned further that the system would give them an advantage over competitors.

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

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

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

- (A) increase the size of crop harvests
- (B) increase the cost of seeds
- (C) reduce demand for chemical pesticides
- (D) reduce the value of farmland
- (E) reduce the number of farmers keeping livestock

5. In 1985 the city's Fine Arts Museum sold 30,000 single-entry tickets. In 1986 the city's Folk Arts and Interior Design museums opened, and these three museums together sold over 80,000 such tickets that year. These museums were worth the cost, since more than twice as many citizens are now enjoying the arts.

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

- (A) Most visitors to one museum also visit the other two.
 - (B) The cost of building the museums will not be covered by revenues generated by the sale of museum tickets.
 - (C) As the two new museums become better known, even more citizens will visit them.
 - (D) The city's Fine Arts Museum did not experience a decrease in single-entry tickets sold in 1986.
 - (E) Fewer museum entry tickets were sold in 1986 than the museum planners had hoped to sell.
6. F: We ought not to test the safety of new drugs on sentient animals, such as dogs and rabbits. Our benefit means their pain, and they are equal to us in the capacity to feel pain.

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

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

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

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

The unemployment rate in the United States fell from 7.5 percent in 1981 to 6.9 percent in 1986. It cannot, however, be properly concluded from these statistics that the number of unemployed in 1986 was lower than it had been in 1981 because-----.

- (A) help-wanted advertisements increased between 1981 and 1986
 - (B) many of the high-paying industrial jobs available in 1981 were replaced by low-wage service jobs in 1986, resulting in displacements of hundreds of thousands of workers
 - (C) in some midwestern industrial states, the unemployment rate was much higher in 1986 than it had been in 1981
 - (D) the total available work force, including those with and without employment, increased between 1981 and 1986
 - (E) the average time that employees stay in any one job dropped during the period 1981 to 1986
8. To reduce costs, a company is considering a drastic reduction in the number of middle-level managers. This reduction would be accomplished by first offering early retirement to those 50 years of age or older with 15 years of service, and then by firing enough of the others to bring the overall reduction to 50 percent.

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

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

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

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

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

Questions 10-11 are based on the following.

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

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

11. Which of the following, if true, would provide most support for concluding from the survey results described above that the use of illegal drugs by people below the age of 20 is declining?
- (A) Changes in the level of drug use by high school seniors are seldom matched by changes in the level of drug use by other people below the age of 20.
 - (B) In the past, high school seniors were consistently the population group most likely to use illegal drugs and most likely to use them heavily.
 - (C) The percentage of high school seniors who use illegal drugs is consistently very similar to the percentage of all people below the age of 20 who use illegal drugs.
 - (D) The decline revealed by the surveys is the result of drug education programs specifically targeted at those below the age of 20.
 - (E) The number of those surveyed who admit to having sold illegal drugs has declined even faster than has the number who have used drugs.
12. President of the United States: I have received over 2,000 letters on this issue, and the vast majority of them support my current position. These letters prove that most of the people in the country agree with me.
- Which of the following, if true, most weakens the President's conclusion?
- (A) The issue is a very divisive one on which many people have strong opinions.
 - (B) Some members of Congress disagree with the President's position.
 - (C) People who disagree with the President feel more strongly about the issue than do people who agree with him.
 - (D) People who agree with the President are more likely to write to him than are people who disagree with him.
 - (E) During the presidential campaign, the President stated a position on this issue that was somewhat different from his current position.

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

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

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

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

- (A) there are usually no figures comparing how much of two different currencies must be spent in order to purchase a given quantity of goods and services
- (B) wage levels for the same job vary greatly from country to country, depending on cultural as well as on purely economic factors
- (C) these figures must be calculated by dividing the gross national product of a country by the size of its population

- (D) comparative access to goods and services is only one of several factors relevant in determining quality of life
- (E) the wealth, and hence the standard of living, of a country's citizens is very closely related to their income

15. The level of lead contamination in United States rivers declined between 1975 and 1985. Federal regulations requiring a drop in industrial discharges of lead went into effect in 1975, but the major cause of the decline was a 75 percent drop in the use of leaded gasoline between 1975 and 1985.

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

- (A) The level of lead contamination in United States rivers fell sharply in both 1975 and 1983.
 - (B) Most of the decline in industrial discharges of lead occurred before 1976, but the largest decline in the level of river contamination occurred between 1980 and 1985.
 - (C) Levels of lead contamination in rivers fell sharply in 1975-1976 and rose very slightly over the next nine years.
 - (D) Levels of lead contamination rose in those rivers where there was reduced river flow due to drought.
 - (E) Although the use of leaded gasoline declined 75 percent between 1975 and 1985, 80 percent of the decline took place in 1985.
16. George Bernard Shaw wrote: "That any sane nation, having observed that you could provide for the supply of bread by giving bakers a pecuniary interest in baking for you, should go on to give a surgeon a pecuniary interest in cutting off your leg is enough to make one despair of political humanity."
- Shaw's statement would best serve as an illustration in an argument criticizing which of the following?
- (A) Dentists who perform unnecessary dental work in order to earn a profit
 - (B) Doctors who increase their profits by specializing only in diseases that affect a large percentage of the population
 - (C) Grocers who raise the price of food in order to increase their profit margins
 - (D) Oil companies that decrease the price of their oil in order to increase their market share
 - (E) Bakers and surgeons who earn a profit by supplying other peoples' basic needs

17. Since 1975 there has been in the United States a dramatic decline in the incidence of traditional childhood diseases such as measles. This decline has been accompanied by an increased incidence of Peterson's disease, a hitherto rare viral infection, among children. Few adults, however, have been affected by the disease.

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

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

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

- (A) The author proceeds from a number of specific observations to a tentative generalization.
- (B) The author applies to the case under discussion facts about phenomena assumed to be similar in some relevant respect.
- (C) A position is strengthened by showing that the opposite of that position would have logically absurd consequences.
- (D) A line of reasoning is called into question on the grounds that it confuses cause and effect in a causal relation.
- (E) An argument is analyzed by separating statements of fact from individual value judgments.

19. It is widely assumed that a museum is helped financially when a generous patron donates a potential exhibit. In truth, however, donated objects require storage space, which is not free, and routine conservation, which is rather expensive. Therefore, such gifts exacerbate rather than lighten the demands made on a museum's financial resources.

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

- (A) To keep patrons well disposed, a museum will find it advisable to put at least some donated objects on exhibit rather than merely in storage.
 - (B) The people who are most likely to donate valuable objects to a museum are also the people who are most likely to make cash gifts to it.
 - (C) A museum cannot save money by resorting to cheap storage under less than adequate conditions, because so doing would drive up the cost of conservation.
 - (D) Patrons expect a museum to keep donated objects in its possession rather than to raise cash by selling them.
 - (E) Objects donated by a patron to a museum are often of such importance that the museum would be obliged to add them to its collection through purchase if necessary.
20. Despite the approach of winter, oil prices to industrial customers are exceptionally low this year and likely to remain so. Therefore, unless the winter is especially severe, the price of natural gas to industrial customers is also likely to remain low.

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

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

CRITICAL REASONING TEST SECTION 12**30 Minutes 20 Questions**

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

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

- (A) The government of Maravia is in the process of building a significant number of roadways.
 - (B) Maravia is an oil-producing country and is able to refine an amount of gasoline sufficient for the needs of its population.
 - (C) Maravia has had an excellent public transportation system for many years.
 - (D) Ninety percent of the population of Maravia is very prosperous and has a substantial amount of disposable income.
 - (E) In Maravia, cars that emit relatively low levels of pollutants cost 10 percent less to operate, on average, than do cars that emit high levels of pollutants.
2. Consumer income reports produced by the government distinguish between households and families by means of the following definition: "A family is a household containing a householder and at least one person related to the householder." Except for the homeless and people in group living quarters, most people live in households.

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

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

Questions 3-4 are based on the following.

The proportion of manufacturing companies in Alameda that use microelectronics in their manufacturing processes increased from 6 percent in 1979 to 66 percent in 1990. Many labor leaders say that the introduction of microelectronics is the principal cause of the great increase in unemployment during that period in Alameda. In actual fact, however, most of the job losses were due to organizational changes. Moreover, according to new figures released by the labor department, there were many more people employed in Alameda in the manufacturing industry in 1990 than in 1979.

3. Which of the following, if true, best reconciles the discrepancy between the increase in unemployment and the increase in jobs in the manufacturing industry of Alameda?
- (A) Many products that contain microelectronic components are now assembled completely by machine.
 - (B) Workers involved in the various aspects of the manufacturing processes that use microelectronic technology need extensive training.
 - (C) It is difficult to evaluate numerically what impact on job security the introduction of microelectronics in the workplace had before 1979.
 - (D) In 1990 over 90 percent of the jobs in Alameda's manufacturing companies were filled by workers who moved to Alameda because they had skills for which there was no demand in Alameda prior to the introduction of microelectronics there.
 - (E) Many workers who have retired from the manufacturing industry in Alameda since 1979 have not been replaced by younger workers.
4. Which of the following, if true, would most strengthen the labor leaders' claim concerning the manufacturing industry in Alameda?
- (A) From 1979 to 1990, fewer employees of manufacturing companies in Alameda lost their jobs because of the introduction of microelectronics than did employees of manufacturing companies in the nearby community of Rockside.
 - (B) The figures on the use of microelectronics that were made public are the result of inquiries made of managers in the manufacturing industry in Alameda.

- (C) The organizational changes that led to job losses in all sectors of the manufacturing industry in Alameda were primarily the result of the introduction of microelectronics.
 - (D) Figures on job losses in the manufacturing industry in Alameda for the late sixties and early seventies have not been made available.
 - (E) A few jobs in the manufacturing industry in Alameda could have been saved if workers had been willing to become knowledgeable in microelectronics.
5. The number of musicians employed to play accompaniment for radio and television commercials has sharply decreased over the past ten years. This has occurred even though the number of commercials produced each year has not significantly changed for the last ten years.

Which of the following, if it occurred during the past ten years, would contribute LEAST to an explanation of the facts above?

- (A) The type of music most popular for use in commercials has changed from a type that requires a large number of instruments to a type that requires very few instruments.
- (B) There has been an increase in the number of commercials that use only the spoken word and sound effects, rather than musical accompaniment.
- (C) There has been an increase in the number of commercials that use a synthesizer, an instrument on which one musician can reproduce the sound of many musicians playing together.
- (D) There has been an increase in the number of commercials that use prerecorded music as their only source of music.
- (E) There has been an increase in the number of commercials that use musicians just starting in the music industry rather than musicians experienced in accompanying commercials.

6. Recent audits revealed that BanqueCard, a credit service, has erred in calculating the interest it charges its clients. But BanqueCard's chief accountant reasoned that the profits that the company shows would remain unaffected by a revision of its clients' credit statements to correct its previous billing errors, since just as many clients had been overcharged as undercharged.

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

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

7. Not Scored

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

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

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

- (A) Residents will be required to exercise care in separating recyclable trash from nonrecyclable trash.
- (B) For trash recycling to be successful, residents must separate recyclable bottles and cans from recyclable paper products.

- (C) Penalties will be levied against residents who fail to sort their trash correctly.
- (D) Individual recycling containers will need to be made of a strong and durable material.
- (E) Recyclable trash that is allowed to accumulate for two weeks will attract rodents.

9. In 1990 all of the people who applied for a job at Evco also applied for a job at Radeco, and Evco and Radeco each offered jobs to half of these applicants. Therefore, every one of these applicants must have been offered a job in 1990.

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

- (A) All of the applicants were very well qualified for a job at either Evco or Radeco.
 - (B) All of the applicants accepted a job at either Evco or Radeco.
 - (C) None of the applicants was offered a job by both Evco and Radeco.
 - (D) None of the applicants had applied for jobs at places other than Evco and Radeco.
 - (E) None of the applicants had perviously worked for either Evco or Radeco.
10. The geese that gather at the pond of a large corporation create a hazard for executives who use the corporate helicopter, whose landing site is 40 feet away from the pond. To solve the problem, the corporation plans to import a large number of herding dogs to keep the geese away from the helicopter.
- Which of the following, if a realistic possibility, would cast the most serious doubt on the prospects for success of the corporation's plan?
- (A) The dogs will form an uncontrollable pack.
 - (B) The dogs will require training to learn to herd the geese.
 - (C) The dogs will frighten away foxes that prey on old and sick geese.
 - (D) It will be necessary to keep the dogs in quarantine for 30 days after importing them.
 - (E) Some of the geese will move to the pond of another corporation in order to avoid being herded by the dogs.

11. When a person is under intense psychological stress, his or her cardiovascular response is the same as it is during vigorous physical exercise. Psychological stress, then, must be beneficial for the heart as is vigorous physical exercise.

The argument above relies on which of the following assumptions?

- (A) Exercise is an effective means of relieving psychological stress.
 - (B) The body's short-term cardiovascular response to any activity indicates that activity's long-term effect on the body.
 - (C) Cardiovascular response during an activity is an adequate measure of how beneficial the activity is for the heart.
 - (D) Psychological stress can have a positive effect on the body.
 - (E) Vigorous exercise is the most reliable method of maintaining a healthy heart.
12. After graduating from high school, people rarely multiply fractions or discuss ancient Rome, but they are confronted daily with decisions relating to home economics. Yet whereas mathematics and history are required courses in the high school curriculum, home economics is only an elective, and few students choose to take it.

Which of the following positions would be best supported by the considerations above?

- (A) If mathematics and history were not required courses, few students would choose to take them.
- (B) Whereas home economics would be the most useful subject for people facing the decisions they must make in daily life, often mathematics and history can also help them face these decisions.
- (C) If it is important to teach high school students subjects that relate to decisions that will confront them in their daily lives, then home economics should be made an important part of the high school curriculum.
- (D) Mathematics, history, and other courses that are not directly relevant to a person's daily life should not be a required part of the high school curriculum.
- (E) Unless high schools put more emphasis on nonacademic subjects like home economics, people graduating from high school will never feel comfortable about making the decisions that will confront them in their daily lives.

13. Houses built during the last ten years have been found to contain indoor air pollution at levels that are, on average, much higher than the levels found in older houses. The reason air-pollution levels are higher in the newer houses is that many such houses are built near the sites of old waste dumps or where automobile emissions are heavy.

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

- (A) Many new houses are built with air-filtration systems that remove from the house pollutants that are generated indoors.
- (B) The easing of standards for smokestack emissions has led to an increase in air-pollution levels in homes.
- (C) New houses built in secluded rural areas are relatively free of air pollutants.
- (D) Warm-weather conditions tend to slow down the movement of air, thus keeping pollution trapped near its source.
- (E) Pressboard, an inexpensive new plywood substitute now often used in the construction of houses, emits the pollutant formaldehyde into the house.

14. The most important aspect of moviemaking is conveying a scene's rhythm. Conveying rhythm depends less on the artistic quality of the individual photographic images than on how the shots go together and the order in which they highlight different aspects of the action taking place in front of the camera.

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

- (A) The artistic quality of the individual photographic image is unimportant in movie photography.
 - (B) Photographers known for the superb artistic quality of their photographs are seldom effective as moviemakers.
 - (C) Having the ability to produce photographs of superb artistic quality does not in itself guarantee having the ability to be a good moviemaker.
 - (D) Movie photographers who are good at their jobs rarely give serious thought to the artistic quality of the photographs they take.
 - (E) To convey a scene's rhythm effectively, a moviemaker must highlight many different aspects of the action taking place.
15. Human beings can see the spatial relations among objects by processing information conveyed by light. Scientists trying to build computers that can detect spatial relations by the same kind of process have so far designed and built stationary machines. However, these scientists will not achieve their goal until they produce such a machine that can move around in its environment.
- Which of the following, if true, would best support the prediction above?
- (A) Human beings are dependent on visual cues from motion in order to detect spatial relations.
 - (B) Human beings can often easily detect the spatial relations among objects, even when those objects are in motion.
 - (C) Detecting spatial relations among objects requires drawing inferences from the information conveyed by light.
 - (D) Although human beings can discern spatial relations through their sense of hearing, vision is usually the most important means of detecting spatial relations.
 - (E) Information about the spatial relations among objects can be obtained by noticing such things as shadows and the relative sizes of objects.

16. In a study of the effect of color on productivity, 50 of 100 factory workers were moved from their drab workroom to a brightly colored workroom. Both these workers and the 50 who remained in the drab workroom increased their productivity, probably as a result of the interest taken by researchers in the work of both groups during the study.
- Which of the following, if true, would cast most doubt upon the author's interpretation of the study results given above?
- (A) The 50 workers moved to the brightly colored room performed precisely the same manufacturing task as the workers who remained in the drab workroom.
 - (B) The drab workroom was designed to provide adequate space for at most 65 workers.
 - (C) The 50 workers who moved to the brightly colored workroom were matched as closely as possible in age and level of training to the 50 workers who remained in the drab workroom.
 - (D) Nearly all the workers in both groups had volunteered to move to the brightly colored workroom.
 - (E) Many of the workers who moved to the brightly colored workroom reported that they liked the drab workroom as well as or better than they liked the brightly colored workroom.

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

Head of Billing: Not at all.

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

- (A) There are more staff members in Accounting than in Billing.
- (B) Two years ago, expenditures in Accounting for clerical supplies were the same as were expenditures that year in Billing for clerical supplies.
- (C) The work of Billing now requires a wider variety of clerical supplies than it did in the past.
- (D) Some of the paper-and-pencil work of both Accounting and Billing has been replaced by work done on computers.
- (E) Members of Accounting found the clerical-supplies cabinet of Billing more convenient to go to for supplies than their own department's cabinet.

19. Most geologists believe oil results from chemical transformations of hydrocarbons derived from organisms buried under ancient seas. Suppose, instead, that oil actually results from bacterial action on other complex hydrocarbons that are trapped within the Earth. As is well known, the volume of these hydrocarbons exceeds that of buried organisms. Therefore, our oil reserves would be greater than most geologists believe.

Which of the following, if true, gives the strongest support to the argument above about our oil reserves?

- (A) Most geologists think optimistically about the Earth's reserves of oil.
 - (B) Most geologists have performed accurate chemical analyses on previously discovered oil reserves.
 - (C) Ancient seas are buried within the Earth at many places where fossils are abundant.
 - (D) The only bacteria yet found in oil reserves could have leaked down drill holes from surface contaminants.
 - (E) Chemical transformations reduce the volume of buried hydrocarbons derived from organisms by roughly the same proportion as bacterial action reduces the volume of other complex hydrocarbons.
20. The wild mouflon sheep of the island of Corsica are direct descendants of sheep that escaped from domestication on the island 8,000 years ago. They therefore provide archaeologists with a picture of what some early domesticated sheep looked like, before the deliberate selective breeding that produced modern domesticated sheep began.

The argument above makes which of the following assumptions?

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

CRITICAL REASONING TEST SECTION 13**25 Minutes 16 Questions**

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

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

- (A) Consumers who do not own television sets are less likely to be influenced in their purchasing decisions by television advertising than are consumers who own television sets.
 - (B) Subscriptions to cable television include access to some public-television channels, which do not accept advertising.
 - (C) For locations with poor television reception, cable television provides picture quality superior to that provided by free television.
 - (D) There is as much advertising on many cable-television channels as there is on "free" television channels.
 - (E) Cable-television subscribers can choose which channels they wish to receive, and the fees vary accordingly.
2. Woodsmoke contains dangerous toxins that cause changes in human cells. Because woodsmoke presents such a high health risk, legislation is needed to regulate the use of open-air fires and wood-burning stoves.

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

- (A) The amount of dangerous toxins contained in woodsmoke is much less than the amount contained in an equal volume of automobile exhaust.
- (B) Within the jurisdiction covered by the proposed legislation, most heating and cooking is done with oil or natural gas.
- (C) Smoke produced by coal-burning stoves is significantly more toxic than smoke from wood-burning stoves.
- (D) No significant beneficial effect on air quality would result if open-air fires were banned within the jurisdiction covered by the proposed legislation.
- (E) In valleys where wood is used as the primary heating fuel, the concentration of smoke results in poor air quality.

3. Within 20 years it will probably be possible to identify the genetic susceptibility an individual may have toward any particular disease. Eventually, effective strategies will be discovered to counteract each such susceptibility. Once these effective strategies are found, therefore, the people who follow them will never get sick.

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

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

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

- (A) Some people employed in the computer industry change jobs if they become bored with their current projects
- (B) A hierarchical work environment hinders the cooperative exchange of ideas that computer industry employees consider necessary for their work.
- (C) Many of Summit's senior employees had previously worked at only one other computer company.
- (D) In a nonhierarchical work environment, people avoid behavior that might threaten group harmony and thus avoid discussing with their colleagues any dissatisfaction they might have with their jobs.
- (E) The cost of living near Summit is relatively low compared to areas in which some other computer companies are located.

5. Financing for a large construction project was provided by a group of banks. When the money was gone before the project was completed, the banks approved additional loans. Now, with funds used up again and completion still not at hand, the banks refuse to extend further loans, although without those loans, the project is doomed.

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

- (A) The banks have reassessed the income potential of the completed project and have concluded that total income generable would be less than total interest due on the old plus the needed new loans.
 - (B) The banks have identified several other projects that offer faster repayment of the principal if loans are approved now to get those projects started.
 - (C) The banks had agreed with the borrowers that the construction loans would be secured by the completed project.
 - (D) The cost overruns were largely due to unforeseeable problems that arose in the most difficult phase of the construction work.
 - (E) The project stimulated the development and refinement of several new construction techniques, which will make it easier and cheaper to carry out similar projects in the future.
6. Low-income families are often unable to afford as much child care as they need. One government program would award low-income families a refund on the income taxes they pay of as much as \$1,000 for each child under age four. This program would make it possible for all low-income families with children under age four to obtain more child care than they otherwise would have been able to afford.

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

- (A) The average family with children under age four spends more than \$1,000 a year on child care.
- (B) Some low-income families in which one of the parents is usually available to care for children under age four may not want to spend their income tax refund on child care.

- (C) The reduction in government revenues stemming from the income tax refund will necessitate cuts in other government programs, such as grants for higher education.
- (D) Many low-income families with children under age four do not pay any income taxes because their total income is too low to be subject to such taxes.
- (E) Income taxes have increased substantially over the past twenty years, reducing the money that low-income families have available to spend on child care.

7. Not scored

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

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

- (A) If a field of study can conclusively answer the questions it raises, then it is a genuine science.
 - (B) Since parapsychology uses scientific methods, it will produce credible results.
 - (C) Any enterprise that does not use controlled experiments and statistical tests is not genuine science.
 - (D) Any field of study that employs scientific methods is a genuine scientific enterprise.
 - (E) Since parapsychology raises clearly statable questions, they can be tested in controlled experiments.
9. Hotco oil burners, designed to be used in asphalt plants, are so efficient that Hotco will sell one to the Clifton Asphalt plant for no payment other than the cost savings between the total amount the asphalt plant actually paid for oil using its former burner during the last two years and the total amount it will pay for oil using the Hotco burner during the next two years. On installation, the plant will make an estimated payment, which will be adjusted after two years to equal the actual cost savings.

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

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

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

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

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

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

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

- (A) The neurons of the brain react less when a subject is trying to recognize patterns than when the subject is doing other kinds of reasoning.
 - (B) Those who performed best in the experiment experienced more satisfaction when working with abstract patterns than did those who performed less well.
 - (C) People who are better at abstract pattern recognition have more energy-efficient neural connections.
 - (D) The energy expenditure of the subjects brains increases when a design that completes the initially recognized pattern is determined.
 - (E) The task of completing a given design is more capably performed by athletes, whose energy expenditure is lower when they are at rest than is that of the general population.
12. A researcher studying drug addicts found that, on average, they tend to manipulate other people a great deal more than nonaddicts do. The researcher concluded that people who frequently manipulate other people are likely to become addicts.

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

- (A) After becoming addicted to drugs, drug addicts learn to manipulate other people as a way of obtaining drugs.
- (B) When they are imprisoned, drug addicts often use their ability to manipulate other people to obtain better living conditions.
- (C) Some nonaddicts manipulate other people more than some addicts do.
- (D) People who are likely to become addicts exhibit unusual behavior patterns other than frequent manipulation of other people
- (E) The addicts that the researcher studied were often unsuccessful in obtaining what they wanted when they manipulated other people.

13. One way to judge the performance of a company is to compare it with other companies. This technique, commonly called "benchmarking," permits the manager of a company to discover better industrial practices and can provide a justification for the adoption of good practices.
- Any of the following, if true, is a valid reason for benchmarking the performance of a company against companies with which it is not in competition rather than against competitors EXCEPT:
- (A) Comparisons with competitors are most likely to focus on practices that the manager making the comparisons already employs.
 - (B) Getting "inside" information about the unique practices of competitors is particularly difficult.
 - (C) Since companies that compete with each other are likely to have comparable levels of efficiency, only benchmarking against noncompetitors is likely to reveal practices that would aid in beating competitors.
 - (D) Managers are generally more receptive to new ideas that they find outside their own industry.
 - (E) Much of the success of good companies is due to their adoption of practices that take advantage of the special circumstances of their products or markets.
14. Among the more effective kinds of publicity that publishers can get for a new book is to have excerpts of it published in a high-circulation magazine soon before the book is published. The benefits of such excerpting include not only a sure increase in sales but also a fee paid by the magazine to the book's publisher.
- Which of the following conclusions is best supported by the information above?
- (A) The number of people for whom seeing an excerpt of a book in a magazine provides an adequate substitute for reading the whole book is smaller than the number for whom the excerpt stimulates a desire to read the book.
 - (B) Because the financial advantage of excerpting a new book in a magazine usually accrues to the book's publisher, magazine editors are unwilling to publish excerpts from new books.
 - (C) In calculating the total number of copies that a book has sold, publishers include sales of copies of magazines that featured an excerpt of the book.
 - (D) The effectiveness of having excerpts of a book published in a magazine, measured in terms of increased sales of a book, is proportional to the circulation of the magazine in which the excerpts are published.
 - (E) Books that are suitable for excerpting in high-circulation magazines sell more copies than books that are not suitable for excerpting.

15. In Swartkans territory, archaeologists discovered charred bone fragments dating back 1 million years. Analysis of the fragments, which came from a variety of animals, showed that they had been heated to temperatures no higher than those produced in experimental campfires made from branches of white stinkwood, the most common tree around Swartkans.

Which of the following, if true, would, together with the information above, provide the best basis for the claim that the charred bone fragments are evidence of the use of fire by early hominids?

- (A) The white stinkwood tree is used for building material by the present-day inhabitants of Swartkans.
 - (B) Forest fires can heat wood to a range of temperatures that occur in campfires.
 - (C) The bone fragments were fitted together by the archaeologists to form the complete skeletons of several animals.
 - (D) Apart from the Swartkans discovery, there is reliable evidence that early hominids used fire as many as 500 thousand years ago.
 - (E) The bone fragments were found in several distinct layers of limestone that contained primitive cutting tools known to have been used by early hominids.
16. For a trade embargo against a particular country to succeed, a high degree of both international accord and ability to prevent goods from entering or leaving that country must be sustained. A total blockade of Patria's ports is necessary to an embargo, but such an action would be likely to cause international discord over the embargo.

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

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

CRITICAL REASONING TEST SECTION 14**25 Minutes 16 Questions**

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

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

- (A) Several of the fundamental principles of physics are involved in producing and analyzing visual images.
 - (B) Knowledge of physics is becoming increasingly important in understanding the technology used in today's world.
 - (C) Equipment that a large producer of photographic equipment has donated to the high school could be used in the proposed curriculum.
 - (D) The number of students interested in physics today is much lower than the number of students interested in physics 50 years ago.
 - (E) In today's world the production and analysis of visual images is of major importance in communications, business, and recreation.
2. Many companies now have employee assistance programs that enable employees, free of charge, to improve their physical fitness, reduce stress, and learn ways to stop smoking. These programs increase worker productivity, reduce absenteeism, and lessen insurance costs for employee health care. Therefore, these programs benefit the company as well as the employee.

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

- (A) Physical fitness programs are often the most popular services offered to employees.
- (B) Studies have shown that training in stress management is not effective for many people.
- (C) Regular exercise reduces people's risk of heart disease and provides them with increased energy.
- (D) Physical injuries sometimes result from entering a strenuous physical fitness program too quickly.
- (E) Employee assistance programs require companies to hire people to supervise the various programs offered.

3. Unlike the wholesale price of raw wool, the wholesale price of raw cotton has fallen considerably in the last year. Thus, although the retail price of cotton clothing at retail clothing stores has not yet fallen, it will inevitably fall.

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

- (A) The cost of processing raw cotton for cloth has increased during the last year.
 - (B) The wholesale price of raw wool is typically higher than that of the same volume of raw cotton.
 - (C) The operating costs of the average retail clothing store have remained constant during the last year.
 - (D) Changes in retail prices always lag behind changes in wholesale prices.
 - (E) The cost of harvesting raw cotton has increased in the last year.
4. Small-business groups are lobbying to defeat proposed federal legislation that would substantially raise the federal minimum wage. This opposition is surprising since the legislation they oppose would, for the first time, exempt all small businesses from paying any minimum wage.

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

- (A) Under the current federal minimum-wage law, most small businesses are required to pay no less than the minimum wage to their employees.
- (B) In order to attract workers, small companies must match the wages offered by their larger competitors, and these competitors would not be exempt under the proposed laws.
- (C) The exact number of companies that are currently required to pay no less than the minimum wage but that would be exempt under the proposed laws is unknown.
- (D) Some states have set their own minimum wages---in some cases, quite a bit above the level of the minimum wage mandated by current federal law---for certain key industries.
- (E) Service companies make up the majority of small businesses and they generally employ more employees per dollar of revenues than do retail or manufacturing businesses.

5. Reviewer: The book *Art's Decline* argues that European painters today lack skills that were common among European painters of preceding centuries. In this the book must be right, since its analysis of 100 paintings, 50 old and 50 contemporary, demonstrates convincingly that none of the contemporary paintings are executed as skillfully as the older paintings.

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

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

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

- (A) No industries other than the pharmaceutical industry have asked for an extension of the 20-year limit on patent protection.
- (B) Clinical trials of new drugs, which occur after the patent is granted and before the new drug can be marketed, often now take as long as 10 years to complete.
- (C) There are several industries in which the ratio of research and development costs to revenues is higher than it is in the pharmaceutical industry.
- (D) An existing patent for a drug does not legally prevent pharmaceutical companies from bringing to market alternative drugs, provided they are sufficiently dissimilar to the patented drug.
- (E) Much recent industrial innovation has occurred in products---for example, in the computer and electronics industries---for which patent protection is often very ineffective.

Questions 7-8 are based on the following.

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

7. The economist's argument makes which of the following assumptions?
- (A) Bank failures are caused when big borrowers default on loan repayments.
 - (B) A significant proportion of depositors maintain accounts at several different banks.
 - (C) The more a depositor has to deposit, the more careful he or she tends to be in selecting a bank.
 - (D) The difference in the interest rates paid to depositors by different banks is not a significant factor in bank failures.
 - (E) Potential depositors are able to determine which banks are secure against failure.
8. Which of the following, if true, most seriously weakens the economist's argument?
- (A) Before the government started to insure depositors against bank failure, there was a lower rate of bank failure than there is now.
 - (B) When the government did not insure deposits, frequent bank failures occurred as a result of depositors' fears of losing money in bank failures.
 - (C) Surveys show that a significant proportion of depositors are aware that their deposits are insured by the government.
 - (D) There is an upper limit on the amount of an individual's deposit that the government will insure, but very few individuals' deposits exceed this limit.
 - (E) The security of a bank against failure depends on the percentage of its assets that are loaned out and also on how much risk its loans involve.

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

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

- (A) Test evacuations showed that putting on the smoke hoods added considerably to the overall time it took passengers to leave the cabin.
 - (B) Some airlines are unwilling to buy the smoke hoods because they consider them to be prohibitively expensive.
 - (C) Although the smoke hoods protect passengers from the toxic gases, they can do nothing to prevent the gases from igniting.
 - (D) Some experienced flyers fail to pay attention to the safety instructions given on every commercial flight before takeoff.
 - (E) In many airplane accidents, passengers who were able to reach emergency exits were overcome by toxic gases before they could exit the airplane.
10. In 1960, 10 percent of every dollar paid in automobile insurance premiums went to pay costs arising from injuries incurred in car accidents. In 1990, 50 percent of every dollar paid in automobile insurance premiums went toward such costs, despite the fact that cars were much safer in 1990 than in 1960.

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

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

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

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

- (A) Most species of caterpillar are subject to some natural predation.
 - (B) Many agricultural pests do not go through a caterpillar stage.
 - (C) Many agriculturally beneficial insects go through a caterpillar stage.
 - (D) Since caterpillars of different species emerge at different times, several sprayings would be necessary.
 - (E) Although the enzyme has been synthesized in the laboratory, no large-scale production facilities exist as yet.
12. Although aspirin has been proven to eliminate moderate fever associated with some illnesses, many doctors no longer routinely recommend its use for this purpose.
A moderate fever stimulates the activity of the body's disease-fighting white blood cells and also inhibits the growth of many strains of disease-causing bacteria.

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

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

13. Because postage rates are rising, Home Decorator magazine plans to maximize its profits by reducing by one half the number of issues it publishes each year. The quality of articles, the number of articles published per year, and the subscription price will not change. Market research shows that neither subscribers nor advertisers will be lost if the magazine's plan is instituted.

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

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

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

- (A) Married couples in which both spouses follow the same sleeping and waking patterns also occasionally have arguments that can jeopardize the couple's marriage.
- (B) The sleeping and waking cycles of individuals tend to vary from season to season.

- (C) The individuals who have sleeping and waking cycles that differ significantly from those of their spouses tend to argue little with colleagues at work.
- (D) People in unhappy marriages have been found to express hostility by adopting a different sleeping and waking cycle from that of their spouses.
- (E) According to a recent study, most people's sleeping and waking cycles can be controlled and modified easily.

Questions 15-16 are based on the following.

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

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

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