

## Type Two Questions

1. A physician who is too thorough in conducting a medical checkup is likely to subject the patient to the discomfort and expense of unnecessary tests. One who is not thorough enough is likely to miss some serious problem and therefore give the patient a false sense of security. It is difficult for physicians to judge exactly how thorough they should be. Therefore, it is generally unwise for patients to have medical checkups when they do not feel ill.

Which one of the following, if true, would provide the most support for the conclusion in the passage?

- (A) Not all medical tests entail significant discomfort.
  - (B) Sometimes, unnecessary medical tests cause healthy people to become ill.
  - (C) Some patients refuse to accept a physician's assurance that the patient is healthy.
  - (D) The more complete the series of tests performed in a medical checkup, the more likely it is that a rare disease, if present, will be discovered.
  - (E) Physicians can eliminate the need to order certain tests by carefully questioning patients and rejecting some possibilities on that basis.
2. In order to increase production, ABC Company should implement a flextime schedule, which would allow individual employees some flexibility in deciding when to begin and end their workday. Studies have shown that working under flextime schedules is associated with increased employee morale.

The argument depends on the assumption that

- (A) the employees who prefer a flextime schedule are the most productive employees at ABC Company
- (B) an increase in the morale of ABC Company's employees could lead to increased production
- (C) flextime schedules tend to be associated with reduced lateness and absenteeism
- (D) employees are most productive during the part of the day when all employees are present
- (E) companies that are in competition with ABC Company also use a flextime schedule

3. Braille is a method of producing text by means of raised dots that can be read by touch. A recent development in technology will allow flat computer screens to be made of a material that can be heated in patterns that replicate the patterns used in braille. Since the thermal device will utilize the same symbol system as braille, it follows that anyone who is accustomed to reading braille can easily adapt to the use of this electronic system.

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

- (A) Braille is the only symbol system that can be readily adapted for use with the new thermal screen.
- (B) Only people who currently use braille as their sole medium for reading text will have the capacity to adapt to the use of the thermal screen.
- (C) People with the tactile ability to discriminate symbols in braille have an ability to discriminate similar patterns on a flat heated surface.
- (D) Some symbol systems encode a piece of text by using dots that replicate the shape of letters of the alphabet.
- (E) Eventually it will be possible to train people to read braille by first training them in the use of the thermal screen.

4. For the last three years, entomologists have been searching for a parasite to help control a whitefly that has recently become a serious crop pest. Believing this new pest to be a variety of sweet-potato whitefly, the entomologists confined their search to parasites of the sweet-potato whitefly. Genetic research now shows the new pest to be a distinct species, the silverleaf whitefly. Therefore, the search for a parasite has so far been wasted effort.

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

- (A) All varieties of the sweet-potato whitefly are serious crop pests.
- (B) If a crop pest has a parasite, that parasite can always be used to control that pest.
- (C) The chances of successfully identifying a useful parasite of the new pest have increased since the proper identification of the pest.
- (D) No parasite of the sweet-potato whitefly is also a parasite of the silverleaf whitefly.
- (E) In the last three years, the entomologists found no parasites of the sweet-potato whitefly.

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5. If a doctor gives a patient only a few options for lifestyle modification, the patient is more likely to adhere to the doctor's advice than if the doctor gives the patient many options.

Which one of the following most accurately expresses the principle illustrated above?

- (A) People are especially likely to ignore the advice they get from doctors if they are confused about that advice.
- (B) People dislike calculating the best of a variety of choices unless they can see a clear difference among the benefits that would result from each choice.
- (C) The tendency people have to alter their behavior varies inversely with the number of alternatives available to them for behavior modification.
- (D) Most people are unlikely to follow their doctor's advice unless they can vividly imagine the consequences of not following the advice.
- (E) In getting good results, the clarity with which a doctor instructs a patient is of equal importance to the accuracy of the doctor's diagnosis on which that instruction is based.

6. Studies of brain lateralization in animals have purported to show that, whereas most human beings are right-handed, about half of any given group of animals will be "left-handed" (i.e., showing a preference for their left limbs) and half will be "right-handed." This finding is suspect, however; it has long been noted that dogs will almost always "shake hands" with the right paw.

Which one of the following, if true, is the strongest defense against the counterexample of dogs that "shake hands"?

- (A) Dogs are observed to scratch themselves with the left leg as well as with the right leg.
- (B) People who observe dogs "shaking hands" are observing a behavior that dogs perform only with a front paw.
- (C) Left-handed people sometimes feel inconvenienced or even stigmatized in a "right-handed world," but dogs face no analogous difficulties.
- (D) Dogs that have lost a limb are able to compensate for the loss, regardless of whether the limb was lost from the right or left side.
- (E) In learning to perform tricks, dogs are influenced by the behavior of their trainers.

7. State researchers have found that since the oil price increases of the 1970s, there has been a decline in home energy consumption. They concluded that almost all of the decline has been achieved through reduced standards of living and changes in the way people spend their time.

Each of the following, if true, would support the conclusion above EXCEPT:

- (A) Sales of portable heaters rose as families concentrated their winter activities in a limited number of rooms.
- (B) During the winter months, more people frequented public places such as libraries and community centers and, on the average, spent considerably longer periods in them than they had previously.
- (C) More than 39 percent of households were able to decrease energy costs substantially by having relatively inexpensive work done to improve the efficiency of their existing heating systems.
- (D) At least 59 percent of households maintained a lower indoor temperature than they had been accustomed to maintain on very cold days.
- (E) Members of at least 60 percent of households showered for shorter periods of time than they had previously.

8. Company president: Grievance procedures should allow the grievant and the respondent to select a mediator who will attempt to work out a resolution. Grievances are costly and mediation could help to resolve many of them. However, beginning mediation fairly late in the process, as our human resources department proposes, would be relatively ineffective.

Which one of the following, if true, most helps to justify the company president's criticism of the human resources department's proposal?

- (A) People who file grievances are unreasonable and would resist listening to a mediator.
- (B) Many disagreements are already being solved without the intervention of a mediator.
- (C) Adversaries' positions tend to harden as a dispute wears on, making compromise less likely.
- (D) Respondents tend to be supervisors who cannot give in to employees without losing authority.
- (E) The mediation process itself is likely to cost as much in time and money as the present grievance procedures.

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9. The demand for used cars has risen dramatically in Germany in recent years. Most of this demand is generated by former East Germans who cannot yet afford new cars and for whom cars were generally unavailable prior to unification. This demand has outstripped supply and thus has exerted an upward pressure on the prices of used cars. Consequently, an increasing number of former West Germans, in order to take advantage of the improved market, will be selling the cars they have owned for several years. Hence, the German new-car market will most likely improve soon as well.

Which one of the following, if true, would most help to support the conclusion about the German new-car market?

- (A) The demand for old cars in former West Germany is greater than the demand for new cars in former East Germany.
- (B) In most European countries, the sale of a used car is subject to less tax than is the sale of a new car.
- (C) Most Germans own very few cars in the course of their lives.
- (D) Most former West Germans purchase new cars once they sell their used cars.
- (E) Many former East Germans prefer to buy cars imported from North America because they are generally larger than European cars.

10. If the ivory trade continues, experts believe, the elephant will soon become extinct in Africa, because poaching is rife in many areas. A total ban on ivory trading would probably prevent the extinction. However, the country of Zimbabwe—which has virtually eliminated poaching within its borders and which relies on income from carefully culling elephant herds that threaten to become too big—objects to such a ban. Zimbabwe holds that the problem lies not with the ivory trade but with the conservation policies of other countries.

Which one of the following principles forms a logical basis for Zimbabwe's objection to a ban?

- (A) International measures to correct a problem should not adversely affect countries that are not responsible for the problem.
- (B) Freedom of trade is not a right but a consequence of agreements among nations.
- (C) Respecting a country's sovereignty is more important than preventing the extinction of a species.
- (D) Prohibitions affecting several countries should be enforced by a supranational agency.
- (E) Effective conservation cannot be achieved without eliminating poaching.

11. A major art theft from a museum was remarkable in that the pieces stolen clearly had been carefully selected. The criterion for selection, however, clearly had not been greatest estimated market value. It follows that the theft was specifically carried out to suit the taste of some individual collector for whose private collection the pieces were destined.

The argument tacitly appeals to which one of the following principles?

- (A) Any art theft can, on the evidence of the selection of pieces stolen, be categorized as committed either at the direction of a single known individual or at the direction of a group of known individuals.
- (B) Any art theft committed at the direction of a single individual results in a pattern of works taken and works left alone that defies rational analysis.
- (C) The pattern of works taken and works left alone can sometimes distinguish one type of art theft from another.
- (D) Art thefts committed with no preexisting plan for the disposition of the stolen works do not always involve theft of the most valuable pieces only.
- (E) The pattern of works taken and works left alone in an art theft can be particularly damaging to the integrity of the remaining collection.

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12. There are tests to detect some of the rare genetic flaws that increase the likelihood of certain diseases. If these tests are performed, then a person with a rare genetic flaw that is detected can receive the appropriate preventive treatment. Since it costs the health-care system less to prevent a disease than to treat it after it has occurred, widespread genetic screening will reduce the overall cost of health care.

The argument assumes which one of the following?

- (A) The cost of treating patients who would, in the absence of screening, develop diseases that are linked to rare genetic flaws would be more than the combined costs of widespread screening and preventive treatment.
- (B) Most diseases linked to rare genetic flaws are preventable.
- (C) The resources allocated by hospitals to the treatment of persons with diseases linked to genetic flaws will increase once screening is widely available.
- (D) Even if the genetic tests are performed, many people whose rare genetic flaws are detected will develop diseases linked to the flaws as a consequence of not receiving the appropriate preventive treatment.
- (E) If preventive treatment is given to patients with rare genetic flaws, additional funds will be available for treating the more common diseases.

13. Once a child's imagination becomes developed, a host of imaginary creatures may torment the child. But this newly developed cognitive capacity may also be used to render these creatures harmless. For instance, a child's new toy may be imagined as an ally, powerful enough to ward off any imaginary threats.

The type of situation described above most closely conforms to which one of the following propositions?

- (A) Some newly developed capacities only give rise to problems.
- (B) Sometimes the cause of a problem may also provide its solution.
- (C) Children are not able to distinguish between real and imaginary threats.
- (D) The most effective way for children to address their fears is to acknowledge them.
- (E) Most problems associated with child-rearing can be solved with a little imagination.

14. One of the requirements for admission to the Lunnville Roller Skating Club is a high degree of skill in roller skating. The club president has expressed concern that the club may have discriminated against qualified women in its admissions this year. Yet half of the applicants admitted to the club this year were women. This proves that there was no discrimination against qualified women applicants in the club's admissions this year.

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

- (A) Only a few applicants were found to be qualified and were admitted to the club this year.
- (B) No more than half of all the roller skaters in Lunnville are women.
- (C) No more than half of all the roller skaters in Lunnville are men.
- (D) This year no more than half of the applicants who met all the qualifications for admission to the club were women.
- (E) This year no more than half of the members of the club's committee that makes decisions about applicants' qualifications were men.

15. A new medication for migraine seems effective, but there is concern that the medication might exacerbate heart disease. If patients with heart disease take the medication under careful medical supervision, however, harmful side effects can definitely be averted. The concern about those side effects is thus unfounded.

The argument depends on which one of the following assumptions?

- (A) The new medication actually is effective when taken by patients with heart disease.
- (B) No migraine sufferers with heart disease will take the new medication except under careful medical supervision.
- (C) Most migraine sufferers who have taken the new medication in trials also had heart disease.
- (D) The new medication has various other side effects, but none as serious as that of exacerbating heart disease.
- (E) The new medication will displace all migraine medications currently being used.

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The number of aircraft collisions on the ground is increasing because of the substantial increase in the number of flights operated by the airlines. Many of the fatalities that occur in such collisions are caused not by the collision itself, but by an inherent flaw in the cabin design of most aircraft, in which seats, by restricting access to emergency exits, impede escape. Therefore, to reduce the total number of fatalities that result annually from such collisions, the airlines should be required to remove all seats that restrict access to emergency exits.

16. Which one of the following, if true, provides the most support for the proposal?
- (A) The number of deaths that occurred in theater fires because theater patrons could not escape was greatly reduced when theaters were required to have aisles leading to each exit.
  - (B) Removing the seats that block emergency exits on aircraft will require a costly refitting of aircraft cabins.
  - (C) In the event of fire, public buildings equipped with smoke detectors have fewer fatalities than do public buildings not so equipped.
  - (D) In the event of collision, passengers on planes with a smaller passenger capacity generally suffer more serious injury than do passengers on planes with a larger passenger capacity.
  - (E) The safety belts attached to aircraft seats function to protect passengers from the full force of impact in the event of a collision.
17. Which one of the following proposals, if implemented together with the proposal made in the passage, would improve the prospects for achieving the stated objective of reducing fatalities?
- (A) The airlines should be required, when buying new planes, to buy only planes with unrestricted access to emergency exits.
  - (B) The airlines should not be permitted to increase further the number of flights in order to offset the decrease in the number of seats on each aircraft.
  - (C) Airport authorities should be required to streamline their passenger check-in procedures to accommodate the increased number of passengers served by the airlines.
  - (D) Airport authorities should be required to refine security precautions by making them less conspicuous without making them less effective.
  - (E) The airlines should not be allowed to increase the ticket price for each passenger to offset the decrease in the number of seats on each aircraft.

18. More than a year ago, the city announced that police would crack down on illegally parked cars and that resources would be diverted from writing speeding tickets to ticketing illegally parked cars. But no crackdown has taken place. The police chief claims that resources have had to be diverted from writing speeding tickets to combating the city's staggering drug problem. Yet the police are still writing as many speeding tickets as ever. Therefore, the excuse about resources being tied up in fighting drug-related crime simply is not true.

The conclusion in the passage depends on the assumption that

- (A) every member of the police force is qualified to work on combating the city's drug problem
  - (B) drug-related crime is not as serious a problem for the city as the police chief claims it is
  - (C) writing speeding tickets should be as important a priority for the city as combating drug-related crime
  - (D) the police could be cracking down on illegally parked cars and combating the drug problem without having to reduce writing speeding tickets
  - (E) the police cannot continue writing as many speeding tickets as ever while diverting resources to combating drug-related crime
19. In 1974 the speed limit on highways in the United States was reduced to 55 miles per hour in order to save fuel. In the first 12 months after the change, the rate of highway fatalities dropped 15 percent, the sharpest one-year drop in history. Over the next 10 years, the fatality rate declined by another 25 percent. It follows that the 1974 reduction in the speed limit saved many lives.
- Which one of the following, if true, most strengthens the argument?
- (A) The 1974 fuel shortage cut driving sharply for more than a year.
  - (B) There was no decline in the rate of highway fatalities during the twelfth year following the reduction in the speed limit.
  - (C) Since 1974 automobile manufacturers have been required by law to install lifesaving equipment, such as seat belts, in all new cars.
  - (D) The fatality rate in highway accidents involving motorists driving faster than 55 miles per hour is much higher than in highway accidents that do not involve motorists driving at such speeds.
  - (E) Motorists are more likely to avoid accidents by matching their speed to that of the surrounding highway traffic than by driving at faster or slower speeds.

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20. Sigatoka disease drastically reduces the yield of banana trees and is epidemic throughout the areas of the world where bananas are grown. The fungus that causes the disease can be controlled with fungicides, but the fungicides can pose a health hazard to people living nearby. The fungicides are thus unsuitable for small banana groves in populated areas. Fortunately, most large banana plantations are in locations so isolated that fungicides can be used safely there. Therefore, most of the world's banana crop is not seriously threatened by Sigatoka disease.

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

- (A) It will eventually be possible to breed strains of bananas that are resistant to Sigatoka disease.
  - (B) Large plantations produce most or all of the world's bananas.
  - (C) Sigatoka disease spreads more slowly on large plantations than in small banana groves.
  - (D) Sigatoka disease is the only disease that threatens bananas on a worldwide scale.
  - (E) Most of the banana trees that have not been exposed to the Sigatoka fungus grow in small banana groves.
21. Harry Trevalga: You and your publication have unfairly discriminated against my poems. I have submitted thirty poems in the last two years and you have not published any of them! It is all because I won the Fenner Poetry Award two years ago and your poetry editor thought she deserved it.

Publisher: Ridiculous! Our editorial policy and practice is perfectly fair, since our poetry editor judges all submissions for publication without ever seeing the names of the poets, and hence cannot possibly have known who wrote your poems.

The publisher makes which one of the following assumptions in replying to Trevalga's charges of unfair discrimination?

- (A) The poetry editor does not bear a grudge against Harry Trevalga for his winning the Fenner Poetry Award.
- (B) It is not unusual for poets to contribute many poems to the publisher's publication without ever having any accepted for publication.
- (C) The poetry editor cannot recognize the poems submitted by Harry Trevalga as his unless Trevalga's name is attached to them.
- (D) The poetry editor's decisions on which poems to publish are not based strictly on judgments of intrinsic merit.
- (E) Harry Trevalga submitted his poems to the publisher's publication under his pen name.

22. Tony: A new kind of videocassette has just been developed. It lasts for only half as many viewings as the old kind does but costs a third as much. Therefore, video rental stores would find it significantly more economical to purchase and stock movies recorded on the new kind of videocassette than on the old kind.

Anna: But the videocassette itself only accounts for 5 percent of the price a video rental store pays to buy a copy of a movie on video; most of the price consists of royalties the store pays to the studio that produced the movie. So the price that video rental stores pay per copy would decrease by considerably less than 5 percent, and royalties would have to be paid on additional copies.

Which one of the following, if true, would contribute most to a defense of Tony's position against Anna's reply?

- (A) The price that video rental stores pay for movies recorded on videocassettes is considerably less than the retail price of those movies.
- (B) A significant proportion of the movies on videocassette purchased by video rental stores are bought as replacements for worn-out copies of movies the stores already have in stock.
- (C) The royalty fee included in the price that video rental stores pay for movies on the new kind of videocassette will be half that included in the price of movies on the old kind.
- (D) Given a choice, customers are more likely to buy a movie on videocassette than to rent it if the rental fee is more than half of the purchase price.
- (E) Many of the movies rented from video rental stores, particularly children's movies, average several viewings per rental fee.

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23. Physiological research has uncovered disturbing evidence linking a number of structural disorders to jogging. Among the ailments seemingly connected with this now-popular sport are spinal disk displacements, stress fractures of the feet and ankles, knee and hip joint deterioration, and tendonitis. Furthermore, these injuries do not occur exclusively among beginning runners—veteran joggers suffer an equal percentage of injuries. What the accumulating data suggest is that the human anatomy is not able to withstand the stresses of jogging.

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

- (A) The link between jogging and certain structural disorders appears to be a causal one.
- (B) Jogging causes more serious disorders than other sports.
- (C) The jogger's level of experience is a factor determining the likelihood of a jogging injury.
- (D) Some sports are safer for the human body than jogging.
- (E) The human species is not very durable.

24. Whether a machine performs its intended function is plain for all to see, but recognition of excellence in art requires a rare subtlety of perception. So whereas engineers usually maintain their composure when their work is being evaluated, artists tend to become anxious under such circumstances.

The reasoning above conforms most closely to which one of the following propositions?

- (A) People who have an interest in working as artists are no more likely to have especially anxious personalities than are people who have an interest in working as engineers.
- (B) The value of a machine is independent of the feelings of those who create it, while the value of an artwork is not.
- (C) Evaluation of the work of engineers should be based on a different set of standards than is evaluation of the work of artists.
- (D) People who create things whose success can be easily ascertained worry less about others' opinions of their work than do people who create things whose value cannot be easily ascertained.
- (E) Someone who creates a work that cannot be easily evaluated tends to be less confident about its value than are those who evaluate it.

25. Kim: Some people claim that the battery-powered electric car represents a potential solution to the problem of air pollution. But they forget that it takes electricity to recharge batteries and that most of our electricity is generated by burning polluting fossil fuels. Increasing the number of electric cars on the road would require building more generating facilities since current facilities are operating at maximum capacity. So even if all of the gasoline-powered cars on the roads today were replaced by electric cars, it would at best be an exchange of one source of fossil-fuel pollution for another.

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

- (A) Replacing gasoline-powered cars with battery-powered electric cars will not lead to a net increase in the total number of cars on the road.
- (B) Gasoline-powered cars are currently not the most significant source of fossil-fuel pollution.
- (C) Replacing gasoline-powered cars with battery-powered electric cars is justified only if electric cars produce less air pollution.
- (D) While it is being operated, a battery-powered electric car does not cause any significant air pollution.
- (E) At least some of the generating facilities built to meet the demand for electricity for battery-powered electric cars would be of a type that burns fossil fuel.

26. Scientific and technological discoveries have considerable effects on the development of any society. It follows that predictions of the future condition of societies in which scientific and technological discovery is particularly frequent are particularly untrustworthy.

The argument depends on assuming which one of the following?

- (A) Predictions of scientific and technological discoveries, or predictions of their effects, have harmful consequences in some societies.
- (B) The development of a society requires scientific and technological discoveries.
- (C) Forecasts of scientific and technological discoveries, or forecasts of their effects, are not entirely reliable.
- (D) An advanced scientific and technological society frequently benefits from new discoveries.
- (E) It is not as difficult to predict scientific and technological discoveries in a technologically more advanced society as it is in a technologically less advanced society.

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27. Most children find it very difficult to explain exactly what the words they use mean when those words do not refer to things that can be seen or touched. Yet, since children are able to use these words to convey the feelings and emotions they are obviously experiencing, understanding what a word means clearly does not depend on being able to explain it.

Which one of the following principles, if accepted, would provide the most justification for the conclusion?

- (A) The fact that a task is very difficult for most people does not mean that no one can do it.
- (B) Anyone who can provide an exact explanation of a word has a clear understanding of what that word means.
- (C) Words that refer to emotions invariably have less narrowly circumscribed conventional meanings than do words that refer to physical objects.
- (D) When someone appropriately uses a word to convey something that he or she is experiencing, that person understands what that word means.
- (E) Words can be explained satisfactorily only when they refer to things that can be seen or touched.

28. The current move to patent computer programs is a move in the wrong direction and should be stopped. The patent system was originally designed solely to protect small-time inventors from exploitation, not to give large corporations control over a methodology. Any computer program is merely the implementation of a methodology.

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

- (A) Computer programs should be developed not only by large corporations but by small-time inventors as well.
- (B) Implementing a methodology always requires less creative effort than does true invention.
- (C) The issue of whether or not to patent computer programs presents the patent system with problems that have never before arisen.
- (D) Large corporations should not hold patents for implementations of methodologies.
- (E) Small-time inventors who support the move to patent computer programs act contrary to their own best interests.

29. In Malsenia sales of classical records are soaring. The buyers responsible for this boom are quite new to classical music and were drawn to it either by classical scores from television commercials or by theme tunes introducing major sports events on television. Audiences at classical concerts, however, are continually shrinking in Malsenia. It can be concluded from this that the new Malsenian converts to classical music, having initially experienced this music as recorded music, are most comfortable with classical music as recorded music and really have no desire to hear live performances.

The argument assumes which one of the following?

- (A) To sell well in Malsenia, a classical record must include at least one piece familiar from television.
- (B) At least some of the new Malsenian buyers of classical records have available to them the option of attending classical concerts.
- (C) The number of classical concerts performed in Malsenia has not decreased in response to smaller audiences.
- (D) The classical records available in Malsenia are, for the most part, not recordings of actual public concerts.
- (E) Classical concerts in Malsenia are not limited to music that is readily available on recordings.

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30. Large quantities of lead dust can be released during renovations in houses with walls painted with lead-based paint. Because the dust puts occupants at high risk of lead poisoning, such renovations should be done only in unoccupied houses by contractors who are experienced in removing all traces of lead from houses and who have the equipment to protect themselves from lead dust. Even when warned, however, many people will not pay to have someone else do renovations they believe they could do less expensively themselves. Therefore, *Homeowners' Journal* should run an article giving information to homeowners on how to reduce the risk of lead poisoning associated with do-it-yourself renovation.

Which one of the following principles most helps to justify the passage's recommendation about an article?

- (A) Potentially dangerous jobs should always be left to those who have the training and experience to perform them safely, even if additional expense results.
- (B) If people refuse to change their behavior even when warned that they are jeopardizing their health, information that enables them to minimize the risks of that behavior should be made available to them.
- (C) A journal for homeowners should provide its readers with information on do-it-yourself projects only if such projects do not entail substantial risks.
- (D) No one should be encouraged to perform a potentially dangerous procedure if doing so could place any other people at risk.
- (E) People who are willing to do work themselves and who are competent to do so should not be discouraged from doing that work.

31. Astorga's campaign promises are apparently just an attempt to please voters. What she says she will do if elected mayor is simply what she has learned from opinion polls that voters want the new mayor to do. Therefore, voters are not being told what Astorga actually intends to do if she becomes mayor.

Which one of the following is a questionable assumption on which the argument relies?

- (A) If she is elected mayor, Astorga will not be capable of carrying out the campaign promises she has made.
- (B) The opinion polls on which Astorga's promises are based do not accurately reflect what voters want the new mayor to do.
- (C) Most voters are unlikely to be persuaded by Astorga's campaign promises to vote for her in the mayoral election.
- (D) Astorga has no strong opinions of her own about what the new mayor ought to do in office.
- (E) Astorga does not actually intend, if elected, to do what she has learned from the public opinion polls that voters want the new mayor to do.

32. Organization president: The stationery and envelopes used in all of the mailings from our national headquarters are made from recycled paper, and we never put anything but letters in the envelopes. When the envelopes have windows, these windows are also made from recycled material. Therefore the envelopes, and thus these mailings, are completely recyclable.

Which one of the following is an assumption on which the organization president's argument depends?

- (A) All the paper used by the organization for purposes other than mailings is recycled.
- (B) The mailings from the organization's national headquarters always use envelopes that have windows.
- (C) The envelope windows made from recycled material are recyclable.
- (D) The envelopes and stationery used in the organization's mailings are always recycled.
- (E) The organization sends mailings only from its national headquarters.

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33. Leona: If the average consumption of eggs in the United States were cut in half, an estimated 5,000 lives might be saved each year.

Thomas: How can that be? That would mean that if people adopt this single change in diet for ten years, the population ten years from now will be greater by 50,000 people than it otherwise would have been.

Which one of the following is a statement that Leona could offer Thomas to clarify her own claim and to address the point he has made?

- (A) It is possible for the population to grow by 5,000 people for every year if the base year chosen for purposes of comparison is one with unusually low population growth.
  - (B) It is accurate to say that 5,000 lives have been saved as long as 5,000 people who would have died in a given year as a result of not changing their diet, did not do so—even if they died for some other reason.
  - (C) If egg consumption were reduced by more than half, the estimated number of lives saved each year could be even more than 5,000.
  - (D) The actual rate of population growth depends not only on the birth rate, but also on changes in life expectancy.
  - (E) For the average consumption of eggs to be cut by half, many individual consumers would have to cut their own consumption by much more than half.
34. Economist: Technology now changes so rapidly that workers need periodic retraining. Such retraining can be efficient only if it allows individual companies to meet their own short-term needs. Hence, large governmental job retraining programs are no longer a viable option in the effort to retrain workers efficiently.
- Which one of the following is an assumption required by the economist's argument?
- (A) Workers did not need to be retrained when the pace of technological change was slower than it is currently.
  - (B) Large job retraining programs will be less efficient than smaller programs if the pace of technological change slows.
  - (C) No single type of retraining program is most efficient at retraining technological workers.
  - (D) Large governmental job retraining programs do not meet the short-term needs of different individual companies.
  - (E) Technological workers are more likely now than in the past to move in order to find work for which they are already trained.

35. There should be a greater use of gasohol. Gasohol is a mixture of alcohol and gasoline, and has a higher octane rating and fewer carbon monoxide emissions than straight gasoline. Burning gasohol adds no more carbon dioxide to the atmosphere than plants remove by photosynthesis.

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

- (A) Cars run less well on gasoline than they do on gasohol.
  - (B) Since less gasoline is needed with the use of gasohol, an energy shortage is less likely.
  - (C) Cars burn on the average slightly more gasohol per kilometer than they do gasoline.
  - (D) Gasohol is cheaper to produce and hence costs less at the pump than gasoline.
  - (E) Burning gasoline adds more carbon dioxide to the atmosphere than plants can remove.
36. Many environmentalists have urged environmental awareness on consumers, saying that if we accept moral responsibility for our effects on the environment, then products that directly or indirectly harm the environment ought to be avoided. Unfortunately it is usually impossible for consumers to assess the environmental impact of a product, and thus impossible for them to consciously restrict their purchases to environmentally benign products. Because of this impossibility there can be no moral duty to choose products in the way these environmentalists urge, since \_\_\_\_\_.

Which one of the following principles provides the most appropriate completion for the argument?

- (A) a moral duty to perform an action is never based solely on the effects the action will have on other people
- (B) a person cannot possibly have a moral duty to do what he or she is unable to do
- (C) moral considerations should not be the sole determinants of what products are made available to consumers
- (D) the morally right action is always the one whose effects produce the least total harm
- (E) where a moral duty exists, it supersedes any legal duty and any other kind of duty

## Type Two Questions

37. Psychologist: There are theories that posit completely different causal mechanisms from those posited by Freudian psychological theory and that are more successful at predicting human behavior. Therefore, Freudian theories of behavior, no matter how suggestive or complex they are, ought to be abandoned in favor of these other theories.

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

- (A) Freudian theories have offered interesting suggestions, which have been shown to be false, about the causes of human behavior.
- (B) A psychological theory with greater predictive success than another is scientifically preferable to it.
- (C) Freudian theory has had little success in predicting how people will behave in various situations.
- (D) Measuring the predictive success of a psychological theory involves considering other theories that attempt to explain the same phenomena.
- (E) Scientific theories become impractical if they posit causal mechanisms beyond a certain level of complexity.

38. Prehistoric chimpanzee species used tools similar to those used by prehistoric humans; prehistoric tools recently found in East Africa are of a type used by both species. The area where the tools were found, however, is a savanna, and whereas there were prehistoric humans who lived in savanna habitats, prehistoric chimpanzees lived only in forests. Therefore, the tools must have been used by humans rather than by chimpanzees.

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

- (A) Prehistoric humans did not carry their tools with them when they traveled from one place to another.
- (B) Since the evolution of the first primates, East Africa has been predominantly savanna.
- (C) Prehistoric humans never ventured into areas of the forest that were inhabited by prehistoric chimpanzees.
- (D) The area where the tools were found was not a forest at the time the tools were in use.
- (E) The prehistoric ancestors of modern chimpanzees were not capable of using tools more sophisticated than those found recently in East Africa.

39. The average cable television company offers its customers 50 channels, but new fiber-optic lines will enable telephone companies to provide 100 to 150 television channels to their customers for the same price as cable companies charge for 50. Therefore, cable companies will be displaced by the new television services offered by telephone companies within a few years.

Which one of the following, if true, most helps to strengthen the argument?

- (A) The initial cost per household of installing new fiber-optic television service will exceed the current cost of installing cable television service.
- (B) The most popular movies and programs on channels carried by cable companies will also be offered on channels carried by the fiber-optic lines owned by the telephone companies.
- (C) Cable television companies will respond to competition from the telephone companies by increasing the number of channels they offer.
- (D) Some telephone companies own cable companies in areas other than those in which they provide telephone services.
- (E) The new fiber-optic services offered by telephone companies will be subject to more stringent governmental programming regulations than those to which cable companies are now subject.

40. Combustion of gasoline in automobile engines produces benzene, a known carcinogen. Environmentalists propose replacing gasoline with methanol, which does not produce significant quantities of benzene when burned. However, combustion of methanol produces formaldehyde, also a known carcinogen. Therefore the environmentalists' proposal has little merit.

Which one of the following, if true, most supports the environmentalists' proposal?

- (A) The engines of some automobiles now on the road burn diesel fuel rather than gasoline.
- (B) Several large research efforts are under way to formulate cleaner-burning types of gasoline.
- (C) In some regions, the local economy is largely dependent on industries devoted to the production and distribution of automobile fuel.
- (D) Formaldehyde is a less potent carcinogen than benzene.
- (E) Since methanol is water soluble, methanol spills are more damaging to the environment than gasoline spills.

## Type Two Questions

41. Head injury is the most serious type of injury sustained in motorcycle accidents. The average cost to taxpayers for medical care for nonhelmeted motorcycle-accident victims is twice that for their helmeted counterparts. Jurisdictions that have enacted motorcycle-helmet laws have reduced the incidence and severity of accident-related head injuries, thereby reducing the cost to taxpayers. Therefore, to achieve similar cost reductions, other jurisdictions should enact motorcycle-helmet laws. For the same reason jurisdictions should also require helmets for horseback riders, since horseback-riding accidents are even more likely to cause serious head injury than motorcycle accidents are.

Which one of the following is an assumption upon which the author's conclusion concerning helmets for horseback riders depends?

- (A) Medical care for victims of horseback-riding accidents is a financial drain on tax funds.
  - (B) The higher rate of serious head injury suffered by victims of horseback-riding accidents is due to the difference in size between horses and motorcycles.
  - (C) The medical costs associated with treating head injuries are higher than those for other types of injury.
  - (D) Most fatalities resulting from horseback-riding and motorcycle accidents could have been prevented if the victims had been wearing helmets.
  - (E) When deciding whether to enact helmet laws for motorcyclists and horseback riders, the jurisdiction's primary concern is the safety of its citizens.
42. A Habitat Conservation Plan (HCP) is based on a law that allows developers to use land inhabited by endangered species in exchange for a promise to preserve critical habitat or provide replacement land nearby. Some individuals of endangered species are lost in return for assurances by the owner or developer that habitat for those remaining animals will be protected. Environmentalists are pleased that HCPs allow them to win concessions from developers who would otherwise ignore rarely enforced environmental laws. Satisfied property owners prefer HCPs to more restrictive prohibitions of land use.

The situation described above most closely conforms to which one of the following principles?

- (A) In order to avoid protracted legal battles environmentalists should compromise with developers.
- (B) Developers should adhere only to those environmental laws that are not overburdensome.
- (C) Laws should not be designed to serve the interests of all the parties concerned since they are often so weak that no one's interest is served well.
- (D) Laws should be fashioned in such a way as to reconcile the interests of developers and environmentalists.
- (E) The most effective means of preserving endangered species is to refrain from alienating property owners.

## Type Two Questions

43. For the past 13 years, high school guidance counselors nationwide have implemented an aggressive program to convince high school students to select careers requiring college degrees. The government reported that the percentage of last year's high school graduates who went on to college was 15 percent greater than the percentage of those who graduated 10 years ago and did so. The counselors concluded from this report that the program had been successful.

The guidance counselors' reasoning depends on which one of the following assumptions about high school graduates?

- (A) The number of graduates who went on to college remained constant each year during the 10-year period.
- (B) Any college courses that the graduates take will improve their career prospects.
- (C) Some of the graduates who went on to college never received guidance from a high school counselor.
- (D) There has been a decrease in the number of graduates who go on to college without career plans.
- (E) Many of last year's graduates who went on to college did so in order to prepare for careers requiring college degrees.

44. A society's infant mortality rate is an accepted indicator of that society's general health status. Even though in some localities in the United States the rate is higher than in many developing countries, in the United States overall the rate has been steadily declining. This decline does not necessarily indicate, however, that babies in the United States are now, on the average, healthier at birth than they were in the past.

Which one of the following reasons, if true, most strongly supports the claim made above about the implications of the decline?

- (A) The figure for infant mortality is compiled as an overall rate and thus masks deficiencies in particular localities.
- (B) Low birth weight is a contributing factor in more than half of the infant deaths in the United States.
- (C) The United States has been developing and has achieved extremely sophisticated technology for saving premature and low-birth-weight babies, most of whom require extended hospital stays.
- (D) In eleven states of the United States, the infant mortality rate declined last year.
- (E) Babies who do not receive adequate attention from a caregiver fail to thrive and so they gain weight slowly.

45. James: Many people claim that the voting public is unable to evaluate complex campaign issues. The television commercials for Reade in the national campaign, however, discuss complex campaign issues, and Reade is, at present, more popular than any other candidate.

Maria: Yes, Reade is the most popular. However, you are incorrect in claiming that this is because of Reade's discussion of complex campaign issues. Reade simply strikes the voters as the most competent and trustworthy candidate.

Which one of the following, if true, most supports Maria's counter to James?

- (A) Reade's opponents are discussing some of the same issues as Reade.
- (B) Reade's opponents charge that Reade oversimplifies complex campaign issues.
- (C) Polling data show that Reade's present popularity will probably diminish over time.
- (D) Polling data show that most voters cannot identify Reade's positions on campaign issues.
- (E) Polling data show that some voters consider Reade competent and trustworthy.

## Type Two Questions

46. Bacteria from food can survive for several days on the surface of plastic cutting boards, but bacteria can penetrate wooden cutting boards almost immediately, leaving the surface free of contamination. Therefore, wooden cutting boards, unlike plastic cutting boards, need not be washed in order to prevent their contaminating food that is cut on them; wiping them off to remove food debris is sufficient.

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

- (A) Washing plastic cutting boards does not remove all bacteria from the surface.
- (B) Prevention of bacterial contamination is the only respect in which wooden cutting boards are superior to plastic cutting boards.
- (C) Food that is not already contaminated with bacteria can be contaminated only by being cut on contaminated cutting boards.
- (D) Bacteria that penetrate into wooden cutting boards do not reemerge on the surface after the cutting boards have been used.
- (E) Washing wooden cutting boards kills bacteria below the surface of the cutting boards.

47. Private industry is trying to attract skilled research scientists by offering them high salaries. As a result, most research scientists employed in private industry now earn 50 percent more than do comparably skilled research scientists employed by the government. So, unless government-employed research scientists are motivated more by a sense of public duty than by their own interests, the government is likely to lose its most skilled research scientists to private industry, since none of these scientists would have problems finding private-sector jobs.

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

- (A) Government research scientists are less likely to receive acknowledgment for their research contributions than are research scientists in the private sector.
- (B) None of the research scientists currently employed by the government earns more than the highest-paid researchers employed in the private sector.
- (C) The government does not employ as many research scientists who are highly skilled as does any large company in the private sector which employs research scientists.
- (D) The government does not provide its research scientists with unusually good working conditions or fringe benefits that more than compensate for the lower salaries they receive.
- (E) Research scientists employed in the private sector generally work longer hours than do researchers employed by the government.

## Type Two Questions

48. During the 1980s, Japanese collectors were very active in the market for European art, especially as purchasers of nineteenth-century Impressionist paintings. This striking pattern surely reflects a specific preference on the part of many Japanese collectors for certain aesthetic attributes they found in nineteenth-century Impressionist paintings.

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

- (A) Impressionist paintings first became popular among art collectors in Europe at the beginning of the twentieth century.
- (B) During the 1980s, the Japanese economy underwent a sustained expansion that was unprecedented in the country's recent history.
- (C) Several nineteenth-century Impressionist painters adopted certain techniques and visual effects found in Japanese prints that are highly esteemed in Japan.
- (D) During the 1960s and 1970s, the prices of nineteenth-century Impressionist paintings often exceeded the prices of paintings by older European masters.
- (E) During the 1980s, collectors from Japan and around the world purchased many paintings and prints by well-known twentieth-century Japanese artists.

49. Mayor: Citing the severity of the city's winters, the city road commissioner has suggested paving our roads with rubberized asphalt, since the pressure of passing vehicles would cause the rubber to flex, breaking up ice on roads and so making ice removal easier and less of a strain on the road-maintenance budget. However, rubberized asphalt is more expensive than plain asphalt and the city's budget for building and maintaining roads cannot be increased. Therefore, the commissioner's suggestion is not financially feasible.

Which one of the following is assumed by the mayor's argument?

- (A) Using rubberized asphalt to pave roads would not have any advantages besides facilitating the removal of ice on roads.
- (B) The severity of winters in the region in which the city is located does not vary significantly from year to year.
- (C) It would cost more to add particles of rubber to asphalt than to add particles of rubber to other materials that are used to pave roads.
- (D) Savings in the cost of ice removal would not pay for the increased expense of using rubberized asphalt to pave roads.
- (E) The techniques the city currently uses for removing ice from city roads are not the least expensive possible, given the type of road surface in place.

50. It is not good for a university to have class sizes that are very large or very small, or to have professors with teaching loads that are very light or very heavy. After all, crowded classes and overworked faculty cripple the institution's ability to recruit and retain both qualified students and faculty.

Which one of the following, if added as a premise to the argument, most helps to justify its conclusion?

- (A) Professors who have very light teaching loads tend to focus their remaining time on research.
- (B) Classes that have very low numbers of students tend to have a lot of classroom discussion.
- (C) Very small class sizes or very light teaching loads indicate incompetence in classroom instruction.
- (D) Very small class sizes or very light teaching loads are common in the worst and the best universities.
- (E) Professors with very light teaching loads have no more office hours for students than professors with normal teaching loads.

## Type Two Questions

51. Editorial: The most vocal proponents of the proposed law are not permanent residents of this island but rather a few of the wealthiest summer residents, who leave when the vacation months have passed. These people will benefit from passage of this law while not having to deal with the problems associated with its adoption. Therefore, anyone who supports the proposed law is serving only the interests of a few outsiders at the cost of creating problems for the island's permanent residents.

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

- (A) The average income of the island's summer residents is greater than the average income of its permanent residents.
- (B) The problems associated with this law outweigh any benefits it might provide the island's permanent residents.
- (C) Most of the island's summer residents would benefit from passage of this law.
- (D) Most of the island's summer residents support passage of this law.
- (E) Most of the island's permanent residents oppose passage of this law.

52. Even though trading in ivory has been outlawed by international agreement, some piano makers still use ivory, often obtained illegally, to cover piano keys. Recently, experts have devised a synthetic ivory that, unlike earlier ivory substitutes, has found favor with concert pianists throughout the world. But because piano makers have never been major consumers of ivory, the development of the synthetic ivory will therefore probably do little to help curb the killing of elephants, from whose tusks most natural ivory is obtained.

Which one of the following, if true, most helps to strengthen the argument?

- (A) Most people who play the piano but are not concert pianists can nonetheless easily distinguish between the new synthetic ivory and inferior ivory substitutes.
- (B) The new synthetic ivory can be manufactured to resemble in color and surface texture any of the various types of natural ivory that have commercial uses.
- (C) Other natural products such as bone or tortoise shell have not proven to be acceptable substitutes for natural ivory in piano keys.
- (D) The most common use for natural ivory is in ornamental carvings, which are prized not only for the quality of their workmanship but also for the authenticity of their materials.
- (E) It costs significantly less to produce the new synthetic ivory than it does to produce any of the ivory substitutes that scientists had developed previously.

## Type Two Questions

53. Columnist: A democratic society cannot exist unless its citizens have established strong bonds of mutual trust. Such bonds are formed and strengthened only by participation in civic organizations, political parties, and other groups outside the family. It is obvious then that widespread reliance on movies and electronic media for entertainment has an inherently corrosive effect on democracy.

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

- (A) Anyone who relies on movies and electronic media for entertainment is unable to form a strong bond of mutual trust with a citizen.
- (B) Civic organizations cannot usefully advance their goals by using electronic media.
- (C) Newspapers and other forms of print media strengthen, rather than weaken, democratic institutions.
- (D) Relying on movies and electronic media for entertainment generally makes people less likely to participate in groups outside their families.
- (E) People who rely on movies and electronic media for entertainment are generally closer to their families than are those who do not.

54. Political theorist: The chief foundations of all governments are the legal system and the police force; and as there cannot be a good legal system where the police are not well paid, it follows that where the police are well paid there will be a good legal system.

The reasoning in the argument is not sound because it fails to establish that

- (A) many governments with bad legal systems have poorly paid police forces
- (B) bad governments with good legal systems must have poorly paid police forces
- (C) a well-paid police force cannot be effective without a good legal system
- (D) a well-paid police force is sufficient to guarantee a good legal system
- (E) some bad governments have good legal systems

55. Passenger volume in the airline industry has declined dramatically over the past two years, and thus fewer travelers and fewer planes are using airports. Since airport expansion can be warranted only by increases in air traffic volume, and since it will probably be at least five years before passenger volume returns to and then exceeds its previous level, it seems surprising that now is the time that airports are going ahead with plans to expand their passenger terminal facilities.

Which one of the following, if true, provides the best reason in favor of the airports' timing of their planned expansions?

- (A) It is generally more difficult to finance major construction projects when the economy is in a period of decline.
- (B) Low volume in passenger air travel permits airport expansion with relatively little inconvenience to the public.
- (C) A rise in fuel costs that is expected in the near future will drive up the cost of all forms of transportation, including airline travel.
- (D) When passenger volume begins to grow again after a period of decline, most airlines can, initially, absorb the increase without adding new routes or new planes.
- (E) A sustained decline in passenger travel could lead to the failure of many airlines and the absorption of their routes by those airlines that survive.

## Type Two Questions

56. Studies of the reliability of eyewitness identifications show little correlation between the accuracy of a witness's account and the confidence the witness has in the account. Certain factors can increase or undermine a witness's confidence without altering the accuracy of the identification. Therefore, police officers are advised to disallow suspect lineups in which witnesses can hear one another identifying suspects.

Which one of the following is a principle underlying the advice given to police officers?

- (A) The confidence people have in what they remember having seen is affected by their awareness of what other people claim to have seen.
- (B) Unless an eyewitness is confronted with more than one suspect at a time, the accuracy of his or her statements cannot be trusted.
- (C) If several eyewitnesses all identify the same suspect in a lineup, it is more likely that the suspect committed the crime than if only one eyewitness identifies the suspect.
- (D) Police officers are more interested in the confidence witnesses have when testifying than in the accuracy of that testimony.
- (E) The accuracy of an eyewitness account is doubtful if the eyewitness contradicts what other eyewitnesses claim to have seen.

57. Until recently, anthropologists generally agreed that higher primates originated about 30 million years ago in the Al Fayyum region of Egypt. However, a 40-million-year-old fossilized fragment of a lower jawbone discovered in Burma (now called Myanmar) in 1978 was used to support the theory that the earliest higher primates originated in Burma. However, the claim is premature, for\_\_\_\_\_.

Which one of the following, if true, is the most logical completion of the paragraph above?

- (A) there are no more primate species in Burma than there are in Egypt
- (B) several anthropologists, using different dating methods, independently confirmed the estimated age of the jawbone fragment
- (C) higher primates cannot be identified solely by their lower jawbones
- (D) several prominent anthropologists do not believe that higher primates could have originated in either Egypt or Burma
- (E) other archaeological expeditions in Burma have unearthed higher-primate fossilized bone fragments that are clearly older than 40 million years

58. Thirty years ago, the percentage of the British people who vacationed in foreign countries was very small compared with the large percentage of the British population who travel abroad for vacations now. Foreign travel is, and always has been, expensive from Britain. Therefore, British people must have, on average, more money to spend on vacations now than they did 30 years ago.

The argument requires assuming which one of the following?

- (A) If foreign travel had been less expensive 30 years ago, British people would still not have had enough money to take vacations abroad.
- (B) If travel to Britain were less expensive, more people of other countries would travel to Britain for their vacations.
- (C) If the percentage of British people vacationing abroad was lower 30 years ago, then the British people of 30 years ago must have spent more money on domestic vacations.
- (D) If more of the British people of 30 years ago had had enough money to vacation abroad, more would have done so.
- (E) If British people are now wealthier than they were 30 years ago, then they must have more money to spend on vacations now than they did 30 years ago.

## Type Two Questions

59. A company with long-outstanding bills owed by its customers can assign those bills to a collection agency that pays the company a fraction of their amount and then tries to collect payment from the customers. Since these agencies pay companies only 15 percent of the total amount of the outstanding bills, a company interested in reducing losses from long-outstanding bills would be well advised to pursue its debtors on its own.

The argument depends on the assumption that

- (A) a company that pursues its debtors on its own typically collects more than 15 percent of the total amount of the long-outstanding bills that it is owed
  - (B) the cost to a company of pursuing its debtors on its own for payment of long-outstanding bills does not exceed 15 percent of the total amount of those bills
  - (C) collection agencies that are assigned bills for collection by companies are unsuccessful in collecting, on average, only 15 percent of the total amount of those bills
  - (D) at least 15 percent of the customers that owe money to companies eventually pay their bills whether or not those bills are assigned to a collection agency
  - (E) unless most of the customers of a company pay their bills, that company in the long run will not be profitable
60. Because quitting smoking is very stressful and leads to weight gain, it is difficult to do. The key to quitting, however, may be as simple as replacing an unhealthy activity with a healthy one. In one study, half of those attempting to quit were assigned to a smoking-cessation program alone, and the other half were assigned to the same program plus fifteen weeks of aerobic exercise. At the one-month mark, none in the first group had quit, but 40 percent of those in the second group had not smoked.
- Each of the following, if true, provides some support for the argument EXCEPT:
- (A) Regular exercise prevents weight gain.
  - (B) Each group in the study included four hundred randomly selected participants.
  - (C) Nonsmokers accustomed to regular exercise do not gain weight when they stop exercising.
  - (D) Aerobic exercise can stimulate the brain's production of endorphins, which reduce tension.
  - (E) Of those in the second group in the study, 38 percent had not smoked at the one-year mark.

61. Literary critic: The meaning of a literary work is not fixed but fluid, and therefore a number of equally valid interpretations of it may be offered. Interpretations primarily involve imposing meaning on a literary work rather than discovering meaning in it, so interpretations need not consider the writer's intentions. Thus, any interpretation of a literary work tells more about the critic than about the writer.

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

- (A) There are no criteria by which to distinguish the validity of different interpretations of literary works.
  - (B) A meaning imposed on a literary work reflects facts about the interpreter.
  - (C) A writer's intentions are relevant to a valid interpretation of the writer's work.
  - (D) The true intentions of the writer of a work of literature can never be known to a critic of that work.
  - (E) The deepest understanding of a literary work requires that one know the writer's history.
62. If the government increases its funding for civilian scientific research, private patrons and industries will believe that such research has become primarily the government's responsibility. When they believe that research is no longer primarily their responsibility, private patrons and industries will decrease their contributions toward research. Therefore, in order to keep from depressing the overall level of funding for civilian scientific research, the government should not increase its own funding.
- Which one of the following is an assumption on which the argument relies?
- (A) Governments should bear the majority of the financial burden of funding for civilian scientific research.
  - (B) Any increase in government funding would displace more private funding for civilian scientific research than it would provide.
  - (C) Private donations toward research are no longer welcomed by researchers whose work receives government funding.
  - (D) Civilian scientific research cannot be conducted efficiently with more than one source of funding.
  - (E) Funding for civilian scientific research is currently at the highest possible level.

## Type Two Questions

63. Skeletal remains of early humans indicate clearly that our ancestors had fewer dental problems than we have. So, most likely, the diet of early humans was very different from ours.

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

- (A) A healthy diet leads to healthy teeth.
- (B) Skeletal remains indicate that some early humans had a significant number of cavities.
- (C) The diet of early humans was at least as varied as is our diet.
- (D) Early humans had a shorter average life span than we do, and the most serious dental problems now tend to develop late in life.
- (E) Diet is by far the most significant factor contributing to dental health.

64. Attorney: I ask you to find Mr. Smith guilty of assaulting Mr. Jackson. Regrettably, there were no eyewitnesses to the crime, but Mr. Smith has a violent character: Ms. Lopez testified earlier that Mr. Smith, shouting loudly, had threatened her. Smith never refuted this testimony.

The attorney's argument is fallacious because it reasons that

- (A) aggressive behavior is not a sure indicator of a violent character
- (B) Smith's testimony is unreliable since he is loud and aggressive
- (C) since Smith never disproved the claim that he threatened Lopez, he did in fact threaten her
- (D) Lopez's testimony is reliable since she is neither loud nor aggressive
- (E) having a violent character is not necessarily associated with the commission of violent crimes

65. Historian: The spread of literacy informs more people of injustices and, in the right circumstances, leads to increased capacity to distinguish true reformers from mere opportunists. However, widespread literacy invariably emerges before any comprehensive system of general education; thus, in the interim, the populace is vulnerable to clever demagogues calling for change. Consequently, some relatively benign regimes may ironically be toppled by their own "enlightened" move to increase literacy.

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

- (A) A demagogue can never enlist the public support necessary to topple an existing regime unless a comprehensive system of general education is in place.
- (B) Without literacy there can be no general awareness of the injustices in a society.
- (C) Any comprehensive system of general education will tend to preserve the authority of benign regimes.
- (D) A lack of general education affects the ability to differentiate between legitimate and illegitimate calls for reform.
- (E) Any benign regime that fails to provide comprehensive general education will be toppled by a clever demagogue.

66. Some health officials are concerned about the current sustained increase in reported deaths from alcohol-related conditions, attributing this increase to a rise in alcoholism. What these health officials are overlooking, however, is that attitudes toward alcoholism have changed radically. Alcoholism is now widely viewed as a disease, whereas in the past it was considered a moral failing. It is therefore likely that more deaths are being reported as alcohol-related because physicians are more likely to identify these deaths as alcohol-related.

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

- (A) The frequent use of alcohol by young people is being reported as occurring at increasingly early ages.
- (B) In some places and times, susceptibility to any kind of disease has been viewed as a moral failing.
- (C) More physicians now than in the past are trained to recognize the physical effects of alcoholism.
- (D) Even though alcoholism is considered to be a disease, most doctors recommend psychological counseling and support groups as the best treatment.
- (E) Many health officials are not physicians.

## Type Two Questions

67. Economist: Some sociologists argue that because capitalism intrinsically involves competition, it weakens the ties between the people of a community. Although this may formerly have been true, modern capitalism requires that there be large corporations. Thus, modern capitalism promotes, rather than weakens, communal ties.

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

- (A) Few economic systems are more successful than modern capitalism in fostering communal ties between citizens.
  - (B) Modern capitalism is designed primarily to distribute goods and services, not to create communal ties between people.
  - (C) Corporations that compete with each other must develop some ties to each other in order to reach agreement on the rules of the competition.
  - (D) Having large corporations in a modern capitalist system promotes the strength of communal ties.
  - (E) An economic system that does not encourage large corporations will be less successful economically than one that does.
68. Problems caused by the leaching of pollutants from dumps and landfills are worst in countries with an annual per capita economic output of \$4,000 to \$5,000, and less severe for considerably poorer and considerably richer countries. This is so because pollution problems increase during the early stages of a country's industrial development but then diminish as increasing industrial development generates adequate resources to tackle such problems. Therefore, problems caused by such leaching in Country X, where the annual per capita economic output is now \$5,000, should begin to diminish in the next few years.

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

- (A) Within the next few years, Country X will impose a system of fines for illegal waste disposal by its industrial companies.
- (B) Countries surrounding Country X will reduce the amount of pollution that their factories release into the air and water.
- (C) Industrial development in Country X will increase in the next few years.
- (D) Country X will begin the process of industrialization in the next few years.
- (E) No other country with a similar amount of industrial development has pollution problems that are as severe as those in Country X.

69. Derek: We must exploit available resources in developing effective anticancer drugs such as the one made from mature Pacific yew trees. Although the yew population might be threatened, the trees should be harvested now, since an effective synthetic version of the yew's anticancer chemical could take years to develop.

Lola: Not only are mature yews very rare, but most are located in areas where logging is prohibited to protect the habitat of the endangered spotted owl. Despite our eagerness to take advantage of a new medical breakthrough, we should wait for a synthetic drug rather than threaten the survival of both the yew and the owl, which could have far-reaching consequences for an entire ecosystem.

Lola's position most closely conforms to which one of the following principles?

- (A) Unless people's well-being is threatened, there should be no higher priority than preserving endangered plant and animal populations.
- (B) Medical researchers should work with environmentalists to come to an agreement about the fate of the Pacific yew and the spotted owl.
- (C) Environmental concerns should play a role in decisions concerning medical research only if human lives are not at stake.
- (D) Only medical breakthroughs that could save human lives would justify threatening the environment.
- (E) Avoiding actions that threaten an entire ecosystem takes precedence over immediately providing advantage to a restricted group of people.

## Type Two Questions

70. Health officials claim that because the foods and beverages mentioned or consumed on many television programs are extremely low in nutritional value, watching television has a bad influence on the dietary habits of television viewers.

The claim by health officials depends on the presupposition that

- (A) the eating and drinking habits of people on television programs are designed to mirror the eating and drinking habits of television viewers
- (B) seeing some foods and beverages being consumed on, or hearing them mentioned on, television programs increases the likelihood that viewers will consume similar kinds of foods and beverages
- (C) the food and beverage industry finances television programs so that the foods and beverages that have recently appeared on the market can be advertised on those programs
- (D) television viewers are only interested in the people on television programs who have the same eating and drinking habits as they do
- (E) the eating and drinking habits of people on television programs provide health officials with accurate predictions about the foods and beverages that will become popular among television viewers

71. Birds need so much food energy to maintain their body temperatures that some of them spend most of their time eating. But a comparison of a bird of a seed-eating species to a bird of a nectar-eating species that has the same overall energy requirement would surely show that the seed-eating bird spends more time eating than does the nectar-eating bird, since a given amount of nectar provides more energy than does the same amount of seeds.

The argument relies on which one of the following questionable assumptions?

- (A) Birds of different species do not generally have the same overall energy requirements as each other.
- (B) The nectar-eating bird does not sometimes also eat seeds.
- (C) The time it takes for the nectar-eating bird to eat a given amount of nectar is not longer than the time it takes the seed-eating bird to eat the same amount of seeds.
- (D) The seed-eating bird does not have a lower body temperature than that of the nectar-eating bird.
- (E) The overall energy requirements of a given bird do not depend on factors such as the size of the bird, its nest-building habits, and the climate of the region in which it lives.

72. Someone who gets sick from eating a meal will often develop a strong distaste for the one food in the meal that had the most distinctive flavor, whether or not that food caused the sickness. This phenomenon explains why children are especially likely to develop strong aversions to some foods.

Which one of the following, if true, provides the strongest support for the explanation?

- (A) Children are more likely than adults to be given meals composed of foods lacking especially distinctive flavors.
- (B) Children are less likely than adults to see a connection between their health and the foods they eat.
- (C) Children tend to have more acute taste and to become sick more often than adults do.
- (D) Children typically recover more slowly than adults do from sickness caused by food.
- (E) Children are more likely than are adults to refuse to eat unfamiliar foods.

73. Critic: People today place an especially high value on respect for others; yet, in their comedy acts, many of today's most popular comedians display blatant disrespect for others. But when people fail to live up to the very ideals they hold in highest esteem, exaggeration of such failings often forms the basis of successful comedy. Thus the current popularity of comedians who display disrespect in their acts is hardly surprising.

The critic's argument depends on which one of the following assumptions?

- (A) People who enjoy comedians who display disrespect in their acts do not place a high value on respect for others.
- (B) Only comedians who display blatant disrespect in their acts are currently successful.
- (C) Many people disapprove of the portrayal of blatant disrespect for others in comedy acts.
- (D) People who value an ideal especially highly do not always succeed in living up to this ideal.
- (E) People today fail to live up to their own ideals more frequently than was the case in the past.

## Type Two Questions

74. Campaigning for election to provincial or state office frequently requires that a candidate spend much time and energy catering to the interests of national party officials who can help the candidate to win office. The elected officials who campaign for reelection while they are in office thus often fail to serve the interests of their local constituencies.

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

- (A) Catering to the interests of national party officials sometimes conflicts with serving the interests of a provincial or state official's local constituencies.
- (B) Only by catering to the interests of national party officials can those who hold provincial or state office win reelection.
- (C) The interests of local constituencies are well served only by elected officials who do not cater to the interests of national party officials.
- (D) Officials elected to provincial or state office are obligated to serve only the interests of constituents who belong to the same party as do the officials.
- (E) All elected officials are likely to seek reelection to those offices that are not limited to one term.

75. Psychologist: Some astrologers claim that our horoscopes completely determine our personalities, but this claim is false. I concede that identical twins—who are, of course, born at practically the same time—often do have similar personalities. However, birth records were examined to find two individuals who were born 40 years ago on the same day and at exactly the same time—one in a hospital in Toronto and one in a hospital in New York. Personality tests revealed that the personalities of these two individuals are in fact different.

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

- (A) Astrologers have not subjected their claims to rigorous experimentation.
- (B) The personality differences between the two individuals cannot be explained by the cultural differences between Toronto and New York.
- (C) The geographical difference between Toronto and New York did not result in the two individuals having different horoscopes.
- (D) Complete birth records for the past 40 years were kept at both hospitals.
- (E) Identical twins have identical genetic structures and usually have similar home environments.

76. Sometimes when their trainer gives the hand signal for "Do something creative together," two dolphins circle a pool in tandem and then leap through the air simultaneously. On other occasions the same signal elicits synchronized backward swims or tail-waving. These behaviors are not simply learned responses to a given stimulus. Rather, dolphins are capable of higher cognitive functions that may include the use of language and forethought.

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

- (A) Mammals have some resemblance to one another with respect to bodily function and brain structure.
- (B) The dolphins often exhibit complex new responses to the hand signal.
- (C) The dolphins are given food incentives as part of their training.
- (D) Dolphins do not interact with humans the way they interact with one another.
- (E) Some of the behaviors mentioned are exhibited by dolphins in their natural habitat.

77. Philosopher: People are not intellectually well suited to live in large, bureaucratic societies. Therefore, people can find happiness, if at all, only in smaller political units such as villages.

The reasoning in the philosopher's argument is flawed because the argument takes for granted that

- (A) no one can ever be happy living in a society in which she or he is not intellectually well suited to live
- (B) the primary purpose of small political units such as villages is to make people happy
- (C) all societies that are plagued by excessive bureaucracy are large
- (D) anyone who lives in a village or other small political unit that is not excessively bureaucratic can find happiness
- (E) everyone is willing to live in villages or other small political units

## Type Two Questions

78. Advertisement: Attention pond owners!

Ninety-eight percent of mosquito larvae in a pond die within minutes after the pond has been treated with BTI. Yet BTI is not toxic to fish, birds, animals, plants, or beneficial insects. So by using BTI regularly to destroy their larvae, you can greatly reduce populations of pesky mosquitoes that hatch in your pond, and you can do so without diminishing the populations of fish, frogs, or beneficial insects in and around the pond.

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

- (A) The most effective way to control the numbers of mosquitoes in a given area is to destroy the mosquito larvae in that area.
- (B) Populations of mosquitoes are not dependent on a single body of water within an area as a place for their larvae to hatch and develop.
- (C) There are no insect pests besides mosquitoes that pond owners might want to eliminate from in and around their ponds.
- (D) The effectiveness of BTI in destroying mosquito larvae in a pond does not require the pond owner's strict adherence to specific application procedures.
- (E) The fish, frogs, and beneficial insects in and around a pond-owner's pond do not depend on mosquito larvae as an important source of food.

79. Novelists cannot become great as long as they remain in academia. Powers of observation and analysis, which schools successfully hone, are useful to the novelist, but an intuitive grasp of the emotions of everyday life can be obtained only by the kind of immersion in everyday life that is precluded by being an academic.

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

- (A) Novelists require some impartiality to get an intuitive grasp of the emotions of everyday life.
- (B) No great novelist lacks powers of observation and analysis.
- (C) Participation in life, interspersed with impartial observation of life, makes novelists great.
- (D) Novelists cannot be great without an intuitive grasp of the emotions of everyday life.
- (E) Knowledge of the emotions of everyday life cannot be acquired by merely observing and analyzing life.

80. Parent: I had tried without success to get my young child to brush her teeth. I had hoped that she would imitate me, or that she would be persuaded by reason to brush her teeth. Then, I made a point of brushing her teeth for her immediately before reading her a story before her naps and at night. After several weeks, when I would pick up a storybook at these times, she began automatically to retrieve her toothbrush and brush her teeth herself.

The parent's experience with the child most closely conforms to which one of the following generalizations?

- (A) Children are most effectively taught to do something by someone's setting an example.
- (B) Children more readily adopt a behavior through habit and repetition than through other means.
- (C) Children are too young to understand rational arguments for adopting a behavior.
- (D) Children often imitate the behavior of others rather than listening to reason.
- (E) Children ordinarily act contrary to their parents' expectations in order to get more attention.

81. Many people say that the press should not pry into the personal lives of private individuals. But the press has the right to publish any story of interest to the public unless that story is libelous. So, if a story about a private individual is not libelous, the press has an obligation to publish it, for such information is clearly of interest to the public.

The argument's reasoning is vulnerable to criticism on the grounds that the argument presumes, without giving warrant, that

- (A) the press can publish nonlibelous stories about private individuals without prying into their personal lives
- (B) one's having a right to do something entails one's having an obligation to do it
- (C) the publishing of information about the personal lives of private individuals cannot be libelous
- (D) if one has an obligation to do something then one has a right to do it
- (E) the press's right to publish always outweighs the individual's right not to be libeled

## Type Two Questions

82. Light utility trucks have become popular among consumers who buy them primarily for the trucks' rugged appearance. Yet although these trucks are tough-looking, they are exempt from the government's car-safety standards that dictate minimum roof strength and minimum resistance to impact. Therefore, if involved in a serious high-impact accident, a driver of one of these trucks is more likely to be injured than is a driver of a car that is subject to these government standards.

The argument depends on the assumption that

- (A) the government has established safety standards for the construction of light utility trucks
- (B) people who buy automobiles solely for their appearance are more likely than other people to drive recklessly
- (C) light utility trucks are more likely than other kinds of vehicles to be involved in accidents that result in injuries
- (D) the trucks' rugged appearance is deceptive in that their engines are not especially powerful
- (E) light utility trucks are less likely to meet the car-safety standards than are cars that are subject to the standards

83. Although the charter of Westside School states that the student body must include some students with special educational needs, no students with learning disabilities have yet enrolled in the school. Therefore, the school is currently in violation of its charter.

The conclusion of the argument follows logically if which one of the following is assumed?

- (A) All students with learning disabilities have special educational needs.
- (B) The school currently has no students with learning disabilities.
- (C) The school should enroll students with special educational needs.
- (D) The only students with special educational needs are students with learning disabilities.
- (E) The school's charter cannot be modified in order to avoid its being violated.

84. The reforms to improve the quality of public education that have been initiated on the part of suppliers of public education have been insufficient. Therefore, reforms must be demanded by consumers. Parents should be given government vouchers with which to pay for their children's education and should be allowed to choose the schools at which the vouchers will be spent. To attract students, academically underachieving schools will be forced to improve their academic offerings.

The argument assumes that

- (A) in selecting schools parents would tend to prefer a reasonable level of academic quality to greater sports opportunities or more convenient location
- (B) improvement in the academic offerings of schools will be enforced by the discipline of the job market in which graduating students compete
- (C) there is a single best way to educate students
- (D) children are able to recognize which schools are better and would influence their parents' decisions
- (E) schools would each improve all of their academic offerings and would not tend to specialize in one particular field to the exclusion of others

## Type Two Questions

85. Sociologist: Suggestions for improved efficiency that derive from employers are unlikely to elicit positive responses from employees, who tend to resent suggestions they did not generate. An employer should therefore engage the employee in a nonthreatening dialogue that emphasizes the positive contributions of the employee to the development of such ideas. Then the ideas employers want to try will be implemented more quickly and effectively.

Which one of the following principles, if valid, most helps to justify the sociologist's reasoning?

- (A) Employees are more likely to accept suggestions for improved efficiency when these suggestions are not obviously directed at them.
- (B) Employees are more likely to carry out ideas for improved efficiency that they believe they have participated in generating.
- (C) Employees are more likely to implement ideas for improved efficiency that derive from a dialogue in which they have participated than from a dialogue in which they have not participated.
- (D) Employees are more likely to generate good ideas for improved efficiency when they do not feel resentment about the process that attempts to formulate such ideas.
- (E) Employees are more likely to resent employers who attempt to implement the employers' rather than the employees' ideas for improved efficiency.

86. One test to determine whether a person has been infected with tuberculosis consists of injecting the person with proteins extracted from the tuberculosis bacterium. Once a person has been infected by a bacterium, the person's immune system subsequently recognizes certain proteins present in that bacterium and attacks the bacterium. This recognition also takes place in the test and results in a skin irritation at the injection site. Hence the physicians who designed the test reasoned that anyone who reacts in this manner to an injection with the tuberculosis proteins has been infected with tuberculosis.

Which one of the following is an assumption on which the physicians' reasoning depends?

- (A) All of the proteins present in disease-causing bacteria can be recognized by the body's immune system.
- (B) Localized skin irritations are a characteristic symptom of tuberculosis in most people.
- (C) The ability of the proteins present in the tuberculosis bacterium to trigger the skin irritation is exclusive to that bacterium.
- (D) Some people who have been injected with proteins extracted from the tuberculosis bacterium will contract tuberculosis as a result of the injection.
- (E) The body's immune system cannot recognize infectious bacteria unless there are sufficient quantities of the bacteria to cause overt symptoms of disease.

87. A local television station is considering a plan to create a panel of child psychologists to review programs in advance of their airing and rate the level of violence. A program that portrays a high level of violence would be listed in newspapers with four guns after the title. On the other hand, if a show has little violence, one gun would appear after its listing. The station believes that this remedy would forewarn parents about the level of violence in any given program.

Which one of the following must the television station assume in order to conclude that the plan will meet its stated purpose?

- (A) Parents would read and pay attention to the ratings listed in the newspapers.
- (B) There would be fewer shows rated with one gun than with four guns.
- (C) The rating system described in the passage is the most effective system available.
- (D) The local television station has an obligation to forewarn parents of the level of violence in television shows.
- (E) Television producers of programs rated as having high levels of violence would make an effort to reduce those levels.

## Type Two Questions

88. Foster: Many species of extremely large North American mammals became extinct during the last ice age, which was also the time of the first human migration to North America. These species could not survive the dramatic changes wrought by this human migration.

Fisch: Those extinctions were caused by the dramatic shift to a harsher climate. The climate changed so rapidly that the species could not adapt.

Which one of the following, if true, most strengthens Fisch's argument?

- (A) Similar species living in parts of the world where there were dramatic changes in climate did not become extinct
- (B) Most of the mammals that survived in North America migrated from Asia at the same time as the humans migrated.
- (C) Human migration to other previously isolated areas has resulted in mammal species becoming extinct.
- (D) Archaeological evidence reveals that the human migrants had a number of different kinds of large weapons.
- (E) The huge size of the mammals made it difficult for them to migrate the great distances to milder environments.

89. The format of network television news programs generally allows advocates of a point of view only 30 seconds to convey their message. Consequently, regular watchers become accustomed to thinking of issues in terms only of slogans and catch phrases, and so the expectation of careful discussion of public issues gradually disappears from their awareness. The format of newspaper stories, on the other hand, leads readers to pursue details of stories headed by the most important facts and so has the opposite effect on regular readers—that of maintaining the expectation of careful discussion of public issues. Therefore, in contrast to regular newspaper reading, regular watching of network television news programs increases the tendency to think of public issues in oversimplified terms.

The argument assumes which one of the following?

- (A) Viewers of network television news programs would be interested in seeing advocates of opposing views present their positions at length.
- (B) Since it is not possible to present striking images that would symbolize events for viewers, and since images hold sway over words in television, television must oversimplify.
- (C) It is not possible for television to present public issues in a way that allows for the nuanced presentation of diverse views and a good-faith interchange between advocates of opposing views.
- (D) In network television news reports, it is not usual for a reporter to offer additional factual evidence and background information to develop a story in which opposing views are presented briefly by their advocates.
- (E) Television news reporters introduce more of their own biases into news stories than do newspaper reporters.

## Type Two Questions

90. Chronic fatigue syndrome is characterized by prolonged fatigue, muscular pain, and neurological problems. It is not known whether these symptoms are all caused by a single virus or whether each symptom is the result of a separate viral infection. A newly synthesized drug has been tested on those who suffer from chronic fatigue syndrome. Although the specific antiviral effects of this drug are unknown, it has lessened the severity of all of the symptoms of chronic fatigue syndrome. Thus there is evidence that chronic fatigue syndrome is, in fact, caused by one virus.

The argument assumes which one of the following?

- (A) All those who suffer from prolonged fatigue also suffer from neurological problems.
- (B) It is more likely that the new drug counteracts one virus than that it counteracts several viruses.
- (C) The symptoms of chronic fatigue syndrome are dissimilar to those of any other syndrome.
- (D) Most syndromes that are characterized by related symptoms are each caused by a single viral infection.
- (E) An antiviral medication that eliminates the most severe symptoms of chronic fatigue syndrome thereby cures chronic fatigue syndrome.

91. In some countries, national planners have attempted to address the problems resulting from increasing urbanization by reducing migration from rural areas. But some economists have suggested an alternative approach. These economists assert that planners could solve these problems effectively by trading goods or services produced by a predominantly urban population in order to obtain the agricultural products that were previously produced domestically.

Which one of the following, if true, would provide the most support for the economists' assertion?

- (A) Government subsidies to urban manufacturers can ease the problems caused by the migration of people from rural to urban areas.
- (B) All problems that have economic causes must have economic solutions.
- (C) A scarcity of agricultural products is a central element of many problems created by urbanization.
- (D) Problems associated with migration to cities from rural areas are primarily due to trade imbalances between countries.
- (E) Free trade policies can exacerbate the problems caused by increasing urbanization.

92. Ethicist: Studies have documented the capacity of placebos to reduce pain in patients who believe that they are receiving beneficial drugs. Some doctors say that they administer placebos because medically effective treatment reinforced by the placebo effect sometimes helps patients recover faster than good treatment alone. But administering placebos is nonetheless ethically questionable, for even if a placebo benefits a patient, a doctor might, for example, have prescribed it just to give the patient satisfaction that something was being done.

The ethicist's argument depends on which one of the following assumptions?

- (A) A patient's psychological satisfaction is not a consideration in administering medical treatment.
- (B) The motivation for administering a placebo can be relevant to the ethical justification for doing so.
- (C) Medical treatment that relies on the placebo effect alone is ethically indefensible.
- (D) The pain relief produced by the placebo effect justifies the deception involved in administering a placebo.
- (E) Administering a placebo is not ethically justified if that treatment is not prescribed by a doctor.

93. The Biocarb Company wants to build a sterilization plant to treat contaminated medical waste in a city neighborhood where residents and environmental activists fear that such a facility will pollute the area. Biocarb's president argues that the operation of the plant cannot cause pollution because the waste would be sterile after processing by the plant. He claims that after exposure for an hour to superheated steam in the autoclave, such refuse would be far cleaner than food prepared in the cleanest kitchen.

The president's argument depends on which one of the following assumptions?

- (A) Environmental activists believe that waste treated with steam will not pollute.
- (B) Handling of the waste before treatment in the proposed facility will not pose a threat of pollution to the area.
- (C) Fear of pollution is the only argument against construction of an autoclave facility for medical waste.
- (D) No others besides environmental activists are concerned about pollution hazards that can result from processing medical waste.
- (E) Treatment by superheated steam represents the surest method of sterilization.

## Type Two Questions

94. Linsey has been judged to be a bad songwriter simply because her lyrics typically are disjointed and subjective. This judgment is ill founded, however, since the writings of many modern novelists typically are disjointed and subjective and yet these novelists are widely held to be good writers.

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

- (A) Disjointed and subjective writing has a comparable effect in modern novels and in songs.
- (B) Some readers do not appreciate the subtleties of the disjointed and subjective style adopted by modern novelists.
- (C) Song lyrics that are disjointed and subjective have at least as much narrative structure as any other song lyrics do.
- (D) A disjointed and subjective style of writing is usually more suitable for novels and song lyrics than it is for any other written works.
- (E) The quality of Linsey's songs is better judged by the quality of their lyrics than by the quality of their musical form.

95. Barnes: The two newest employees at this company have salaries that are too high for the simple tasks normally assigned to new employees and duties that are too complex for inexperienced workers. Hence, the salaries and the complexity of the duties of these two newest employees should be reduced.

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

- (A) The duties of the two newest employees are not less complex than any others in the company.
- (B) It is because of the complex duties assigned that the two newest employees are being paid more than is usually paid to newly hired employees.
- (C) The two newest employees are not experienced at their occupations.
- (D) Barnes was not hired at a higher-than-average starting salary.
- (E) The salaries of the two newest employees are no higher than the salaries that other companies pay for workers with a similar level of experience.

96. The present goal of the field of medicine seems to be to extend life indefinitely. Increasingly, the ability to transplant such organs as hearts, lungs, livers, and kidneys will allow us to live longer. But we can never achieve brain transplants. There are, for a start, ten million nerves running from the brain down the neck, not to mention the millions joining the brain to the sensing organs. Clearly, then, as the transplantation of organs allows more and more people to live longer, those with degenerative brain disorders will form an ever-increasing proportion of the population.

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

- (A) Degenerative brain disorders will increasingly strike younger and younger patients.
- (B) It is still quite rare for people to live long enough to need more than one transplant of any given organ.
- (C) There are degenerative brain disorders that will not be curable without brain transplants.
- (D) Degenerative brain disorders account for a very small proportion of deaths in the population at large.
- (E) More is being spent on research into degenerative brain disorders than on research into transplantation.

97. The mayor boasts that the average ambulance turnaround time, the time from summons to delivery of the patient, has been reduced this year for top-priority emergencies. This is a serious misrepresentation. This "reduction" was produced simply by redefining "top priority." Such emergencies used to include gunshot wounds and electrocutions, the most time-consuming cases. Now they are limited strictly to heart attacks and strokes.

Which one of the following would strengthen the author's conclusion that it was the redefinition of "top priority" that produced the reduction in turnaround time?

- (A) The number of heart attacks and strokes declined this year.
- (B) The mayor redefined the city's financial priorities this year.
- (C) Experts disagree with the mayor's definition of "top-priority emergency."
- (D) Other cities include gunshot wound cases in their category of top-priority emergencies.
- (E) One half of all of last year's top-priority emergencies were gunshot wounds and electrocution cases.

## Type Two Questions

98. Environmentalist: It takes less energy to make molten glass from recycled glass than from raw materials. Once the recycled glass or raw materials have been turned into molten glass, making bottles from recycled glass follows the same process as making bottles from raw materials. Obviously, soft drink bottlers who make a large percentage of their bottles from recycled glass have significant energy savings. Therefore, by using recycled glass instead of glass made from raw materials, bottlers can lower their costs and benefit the environment at the same time.

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

- (A) The process of making bottles from plastic that has been recycled is not significantly more energy efficient than is the process of making bottles from glass that has been recycled.
- (B) The amount of glass that is currently recycled each year is enough to supply the major soft drink bottlers with materials for a large percentage of the glass bottles they make that year.
- (C) Most consumers are not able to distinguish bottles made from recycled glass from glass bottles made from raw materials.
- (D) Purchasing and transport costs are not so much greater for recycled glass than for raw materials that they outweigh the savings in energy costs resulting from the use of recycled glass.
- (E) The process of making molten glass from recycled glass requires fewer steps than does the process of making molten glass from raw materials.

99. Funding opponent: Some people favor city funding for the spaying and neutering of pets at the owners' request. They claim that the decrease in the number of stray animals to contend with will offset the cost of the funding. These people fail to realize that over 80 percent of pet owners already pay to spay or neuter their animals, so there will not be a significant decrease in the number of stray animals in the city if this funding is provided.

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

- (A) Very few of the stray animals in the city are offspring of pets.
  - (B) Many pet owners would have their animals spayed or neutered sooner if funding were provided by the city.
  - (C) The only way the number of stray animals can decrease is if existing strays are spayed or neutered.
  - (D) Most pet owners who do not have their pets spayed or neutered believe that spaying and neutering are morally wrong.
  - (E) The majority of pets that are not spayed or neutered are used for breeding purposes, and are not likely to produce stray animals.
100. So-called "engineered foods," usually in powder or liquid form, consist of protein that is distilled from natural sources and supplemented with vitamins and minerals. Although the amino acids contained in such products stimulate the production of growth hormones, these hormones produce growth in connective tissue rather than in muscle mass; this does not improve muscle strength. Hence, athletes, who need to improve their muscular strength, should not consume engineered foods.

The argument depends on assuming which one of the following?

- (A) An increase in muscle mass produces an increase in strength.
- (B) People who are not athletes require neither stronger connective tissue nor muscle strength.
- (C) If an engineered food does not improve muscle strength, there is no other substantial advantage to athletes from consuming it.
- (D) Consuming engineered foods that provide nutrients that can be obtained more easily elsewhere is unhealthy.
- (E) Growth of muscle mass enhances muscle strength only when accompanied by growth of connective tissue.

## Type Two Questions

101. According to current geological theory, the melting of ice at the end of the Ice Age significantly reduced the weight pressing on parts of the earth's crust. As a result, lasting cracks in the earth's crust appeared in some of those parts under the stress of pressure from below. At the end of the Ice Age Sweden was racked by severe earthquakes. Therefore, it is likely that the melting of the ice contributed to these earthquakes.

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

- (A) The earth's crust tends to crack whenever there is a sudden change in the pressures affecting it.
  - (B) There are various areas in Northern Europe that show cracks in the earth's crust.
  - (C) Evidence of severe earthquakes around the time of the end of the Ice Age can be found in parts of northern Canada.
  - (D) Severe earthquakes are generally caused by cracking of the earth's crust near the earthquake site.
  - (E) Asteroid impacts, which did occur at the end of the Ice Age, generally cause severe earthquakes.
102. Political commentator: Voters tend to elect the candidate whose visual image most evokes positive feelings. Thus, laws designed to increase the fairness of elections should not allow one candidate to buy significantly more media exposure than any rival candidates can afford.

Which one of the following is an assumption on which the political commentator's argument depends?

- (A) Elections are unfair only if at least one of the candidates has more resources than any rival candidate has.
- (B) People have positive feelings toward election candidates only when they find the candidates' visual images familiar.
- (C) The tendency of a candidate's visual image to evoke positive feelings in voters at least sometimes increases as media exposure increases.
- (D) Candidates invariably buy as much media exposure as they can afford and campaign laws allow.
- (E) Any candidate whose visual image does not evoke many positive feelings in voters will not be elected.

103. Lines can be parallel in a Euclidean system of geometry. But the non-Euclidean system of geometry that has the most empirical verification is regarded by several prominent physicists as correctly describing the universe we inhabit. If these physicists are right, in our universe there are no parallel lines.

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

- (A) There are no parallel lines in the non-Euclidean system of geometry that has the most empirical verification.
  - (B) Most physicists have not doubted the view that the universe is correctly described by the non-Euclidean system of geometry that has the most empirical verification.
  - (C) There are no parallel lines in every non-Euclidean system of geometry that has any empirical verification.
  - (D) The universe is correctly described by the non-Euclidean system of geometry that has the most empirical verification if prominent physicists maintain that it is.
  - (E) Only physicists who are not prominent doubt the view that the universe is correctly described by the non-Euclidean system of geometry that has the most empirical verification.
104. Letter to the editor: Allowing everyone to voice personal views can have the effect of inhibiting some from voicing their concerns. Thus, allowing unrestricted free speech really inhibits free speech.

Which one of the following, if true, does most to justify the apparently contradictory conclusion above?

- (A) When free speech is unrestricted, many people will be shocked by the power of the views of others and thereby become afraid to voice their own concerns.
- (B) When there is unrestricted free speech, there will be a greater number of diverse views expressed, but the views expressed will be potentially offensive to many people.
- (C) Since unrestricted free speech can be offensive, free speech should be restricted when the pain that it causes is great.
- (D) Claiming that unrestricted free speech inhibits free speech is like claiming that increasing someone's salary makes the person poorer.
- (E) When free speech is unrestricted, people offended by the views of others are likely to voice their disagreement, leading toward a resolution of conflict.

## Type Two Questions

105. The economies of some industrialized countries face the prospect of large labor shortages in the decades ahead. Meanwhile, these countries will have a vast number of experienced and productive older workers who, as things stand, will be driven from the work force upon reaching the age of sixty-five by the widespread practice of requiring workers to retire at that age. Therefore, if the discriminatory practice of mandatory retirement at age sixty-five were eliminated, the labor shortages facing these economies would be averted.

The argument assumes that

- (A) older workers have acquired skills that are extremely valuable and that their younger colleagues lack
  - (B) workers in industrialized countries are often unprepared to face the economic consequences of enforced idleness
  - (C) a large number of workers in some industrialized countries would continue working beyond the age of sixty-five if workers in those countries were allowed to do so
  - (D) mandatory retirement at age sixty-five was first instituted when life expectancy was considerably lower than it is today
  - (E) a substantial proportion of the population of officially retired workers is actually engaged in gainful employment
106. Politician: My opponents argue that the future of our city depends on compromise—that unless the city’s leaders put aside their differences and work together toward common goals, the city will suffer. However, the founders of this city based the city’s charter on definite principles, and anyone who compromises those principles betrays the city founders’ goals. What my opponents are advocating, therefore, is nothing less than betraying the goals of the city’s founders.

Critic: I’m afraid your argument is flawed. Unless you’re assuming that the differences among the city’s leaders are differences of principle, your argument depends on a misleading use of the term \_\_\_\_\_.

Which one of the following provides the most logical completion of the critic’s statement?

- (A) betray
- (B) common
- (C) compromise
- (D) principles
- (E) opponents

107. When investigators discovered that the director of a local charity had repeatedly overstated the number of people his charity had helped, the director accepted responsibility for the deception. However, the investigators claimed that journalists were as much to blame as the director was for inflating the charity’s reputation, since they had naively accepted what the director told them, and simply reported as fact the numbers he gave them.

Which one of the following principles, if valid, most helps to justify the investigators’ claim?

- (A) Anyone who works for a charitable organization is obliged to be completely honest about the activities of that organization.
- (B) Anyone who knowingly aids a liar by trying to conceal the truth from others is also a liar.
- (C) Anyone who presents as factual a story that turns out to be untrue without first attempting to verify that story is no less responsible for the consequences of that story than anyone else is.
- (D) Anyone who lies in order to advance his or her own career is more deserving of blame than someone who lies in order to promote a good cause.
- (E) Anyone who accepts responsibility for a wrongful act that he or she committed is less deserving of blame than someone who tries to conceal his or her own wrongdoing.

## Type Two Questions

108. Essayist: One of the claims of laissez-faire economics is that increasing the minimum wage reduces the total number of minimum-wage jobs available. In a recent study, however, it was found that after an increase in the minimum wage, fast-food restaurants kept on roughly the same number of minimum-wage employees as before the increase. Therefore, laissez-faire economics is not entirely accurate.

The essayist's argument depends on assuming which one of the following?

- (A) If laissez-faire economics makes an incorrect prediction about the minimum wage, then all the doctrines of laissez-faire economics are inaccurate.
- (B) Minimum-wage job availability at fast-food restaurants included in the study was representative of minimum-wage job availability in general.
- (C) No study has ever found that a business has decreased the number of its minimum-wage employees after an increase in the minimum wage.
- (D) The fast-food restaurants included in the study did not increase the average wage paid to employees.
- (E) The national unemployment rate did not increase following the increase in the minimum wage.

109. Insects can see ultraviolet light and are known to identify important food sources and mating sites by sensing the characteristic patterns of ultraviolet light that these things reflect. Insects are also attracted to *Glomosis* spiderwebs, which reflect ultraviolet light. Thus, insects are probably attracted to these webs because of the specific patterns of ultraviolet light that these webs reflect.

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

- (A) When webs of many different species of spider were illuminated with a uniform source of white light containing an ultraviolet component, many of these webs did not reflect the ultraviolet light.
- (B) When the silks of spiders that spin silk only for lining burrows and covering eggs were illuminated with white light containing an ultraviolet component, the silks of these spiders reflected ultraviolet light.
- (C) When webs of the comparatively recently evolved common garden spider were illuminated with white light containing an ultraviolet component, only certain portions of these webs reflected ultraviolet light.
- (D) When *Drosophila* fruit flies were placed before a *Glomosis* web and a synthetic web of similar pattern that also reflected ultraviolet light and both webs were illuminated with white light containing an ultraviolet component, many of the fruit flies flew to the *Glomosis* web.
- (E) When *Drosophila* fruit flies were placed before two *Glomosis* webs, one illuminated with white light containing an ultraviolet component and one illuminated with white light without an ultraviolet component, the majority flew to the ultraviolet reflecting web.

## Type Two Questions

110. Eva: A “smart highway” system should be installed, one that would monitor areawide traffic patterns and communicate with computers in vehicles or with programmable highway signs to give drivers information about traffic congestion and alternate routes. Such a system, we can infer, would result in improved traffic flow in and around cities that would do more than improve drivers’ tempers; it would decrease the considerable loss of money and productivity that now results from traffic congestion.

Luis: There are already traffic reports on the radio. Why would a “smart highway” system be any better?

Eva’s argument depends on the assumption that

- (A) on “smart highways” there would not be the breakdowns of vehicles that currently cause traffic congestion
  - (B) traffic lights, if coordinated by the system, would assure a free flow of traffic
  - (C) traffic flow in and around cities is not now so congested that significant improvement is impossible
  - (D) the type of equipment used in “smart highway” systems would vary from one city to another
  - (E) older vehicles could not be fitted with equipment to receive signals sent by a “smart highway” system
111. Everyone likes repertory theater. Actors like it because playing different roles each night decreases their level of boredom. Stagehands like it because changing sets every night means more overtime and, thus, higher pay. Theater managers like it because, if plays that reflect audience demand are chosen for production, most performances generate large revenues. It is evident, therefore, that more theaters should change to repertory.
- The argument above would be strengthened if which one of the following were true?
- (A) In a repertory theater, a large capital outlay is required at the beginning of each season.
  - (B) In a repertory theater, patrons need to pay overly close attention to the schedule in order to make their theater plans.
  - (C) In a repertory theater, storage space for sets for more than one production must be available.
  - (D) In a repertory theater, plays can be rescheduled to meet audience demand.
  - (E) In a repertory theater, some actors who change roles from night to night find it difficult to master all of the roles they play.

112. Proponents of organic farming claim that using chemical fertilizers and pesticides in farming is harmful to local wildlife. To produce the same amount of food, however, more land must be under cultivation when organic farming techniques are used than when chemicals are used. Therefore, organic farming leaves less land available as habitat for local wildlife.

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

- (A) Chemical fertilizers and pesticides pose no health threat to wildlife.
  - (B) Wildlife living near farms where chemicals are used will not ingest any food or water containing those chemicals.
  - (C) The only disadvantage to using chemicals in farming is their potential effect on wildlife.
  - (D) The same crops are grown on organic farms as on farms where chemicals are used.
  - (E) Land cultivated by organic farming methods no longer constitutes a habitat for wildlife.
113. The scientific theory of evolution has challenged the view of human origin as divine creation and sees us as simply descended from the same ancestors as the apes. While science and technology have provided brilliant insights into our world and eased our everyday life, they have simultaneously deprived us of a view in which our importance is assured. Thus, while science has given us many things, it has taken away much that is also greatly valued.
- Which one of the following is assumed in the passage?

- (A) Science and technology are of less value than religion.
- (B) People have resisted the advances of science and technology.
- (C) The assurance that people are important is highly valued.
- (D) The world was a better place before the advent of science and technology.
- (E) The need of people to feel important is now met by science and technology.

## Type Two Questions

114. The director of a secondary school where many students were having severe academic problems imppaneled a committee to study the matter. The committee reported that these students were having academic problems because they spent large amounts of time on school sports and too little time studying. The director then prohibited all students who were having academic problems from taking part in sports in which they were active. He stated that this would ensure that such students would do well academically.

The reasoning on which the director bases his statement is not sound because he fails to establish that

- (A) some students who spend time on sports do not have academic problems
- (B) all students who do well academically do so because of time saved by not participating in sports
- (C) at least some of the time the students will save by not participating in sports will be spent on solving their academic problems
- (D) no students who do well academically spend time on sports
- (E) the quality of the school's sports program would not suffer as a result of the ban

115. Historian: Political regimes that routinely censor various forms of expression on the grounds that they undermine public morality inevitably attempt to expand the categories of proscribed expression to include criticisms that these regimes perceive to threaten their power. Accordingly, many totalitarian regimes classify as blasphemous or pornographic those writings that would, if widely influential, reduce public passivity.

Which one of the following is an assumption on which the historian's reasoning depends?

- (A) Unless a piece of writing expresses something that is widely believed, it is unlikely to be very popular.
- (B) Not all political regimes that routinely censor forms of expression on the grounds that they erode public morality are totalitarian regimes.
- (C) A totalitarian regime can perceive loss of public passivity as a threat to its power.
- (D) Widespread public passivity is usually needed for a regime to retain political power.
- (E) Most writings that totalitarian regimes label blasphemous or pornographic would, if widely influential, reduce public passivity.

116. Modern physicians often employ laboratory tests, in addition to physical examinations, in order to diagnose diseases accurately. Insurance company regulations that deny coverage for certain laboratory tests therefore decrease the quality of medical care provided to patients.

Which one of the following is an assumption that would serve to justify the conclusion above?

- (A) Physical examinations and the uncovered laboratory tests together provide a more accurate diagnosis of many diseases than do physical examinations alone.
- (B) Many physicians generally oppose insurance company regulations that, in order to reduce costs, limit the use of laboratory tests.
- (C) Many patients who might benefit from the uncovered laboratory tests do not have any form of health insurance.
- (D) There are some illnesses that experienced physicians can diagnose accurately from physical examination alone.
- (E) Laboratory tests are more costly to perform than are physical examinations.

117. As far as we know, Earth is the only planet on which life has evolved, and all known life forms are carbon-based. Therefore, although there might exist noncarbon-based life on planets very unlike Earth, our scientific estimates of the probability of extraterrestrial life should be generated from estimates of the number of planets like Earth and the likelihood of carbon-based life on those planets.

Which one of the following general principles most strongly supports the recommendation?

- (A) There is no good reason to think that unobserved phenomena closely resemble those that have been observed.
- (B) A scientific theory that explains a broad range of phenomena is preferable to a competing theory that explains only some of those phenomena.
- (C) It is preferable for scientists to restrict their studies to phenomena that are observable and forego making estimates about unobservable things.
- (D) A scientific theory that explains observed phenomena on the basis of a few principles that are independent of each other is preferable to a theory that explains those same phenomena on the basis of many independent principles.
- (E) Estimations of probability that are more closely tied to what is known are preferable to those that are less closely tied to what is known.

## Type Two Questions

118. John works five days each week except when on vacation or during weeks in which national holidays occur. Four days a week he works in an insurance company; on Fridays he works as a blacksmith. Last week there were no holidays, and John was not on vacation. Therefore, he must have worked in the insurance company on Monday, Tuesday, Wednesday, and Thursday last week.

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

- (A) John never takes a vacation of more than one week in length.
  - (B) Every day last week that John worked, he worked for an entire workday.
  - (C) John does not take vacations in weeks in which national holidays occur.
  - (D) Last week John worked neither on Saturday nor on Sunday.
  - (E) There were no days last week on which John both worked in the insurance company and also worked as a blacksmith.
119. Editorial: The structure of the present school calendar was established to satisfy the requirements of early-twentieth-century agricultural life. In those days, farmers needed their children to have long breaks during which they could remain at home and help with the harvest. The contemporary school year is thus made up of periods of study interspersed with long breaks. But agricultural life no longer occupies most of our citizens, so we can now make changes that serve the interests of children. Therefore, long breaks should be removed from the school calendar.

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

- (A) During long breaks children have a tendency to forget what they have learned.
- (B) Children of farmers need to continue observing a school calendar made up of periods of study interspersed with long breaks.
- (C) Long breaks in the school calendar should be replaced with breaks that are no longer than workers' average vacations.
- (D) A change in the present school calendar that shortened breaks would serve the interests of agricultural life.
- (E) A school calendar made up of periods of study without long breaks would serve the interests of children more than a school calendar with long breaks.

120. In clinical trials of new medicines, half of the subjects receive the drug being tested and half receive a physiologically inert substance—a placebo. Trials are designed with the intention that neither subjects nor experimenters will find out which subjects are actually being given the drug being tested. However, this intention is frequently frustrated because\_\_\_\_\_.

Which one of the following, if true, most appropriately completes the explanation?

- (A) often the subjects who receive the drug being tested develop symptoms that the experimenters recognize as side effects of the physiologically active drug
  - (B) subjects who believe they are receiving the drug being tested often display improvements in their conditions regardless of whether what is administered to them is physiologically active or not
  - (C) in general, when the trial is intended to establish the experimental drug's safety rather than its effectiveness, all of the subjects are healthy volunteers
  - (D) when a trial runs a long time, few of the experimenters will work on it from inception to conclusion
  - (E) the people who are subjects for clinical trials must, by law, be volunteers and must be informed of the possibility that they will receive a placebo
121. Marine biologists had hypothesized that lobsters kept together in lobster traps eat one another in response to hunger. Periodic checking of lobster traps, however, has revealed instances of lobsters sharing traps together for weeks. Eight lobsters even shared one trap together for two months without eating one another. The marine biologists' hypothesis, therefore, is clearly wrong.
- The argument against the marine biologists' hypothesis is based on which one of the following assumptions?
- (A) Lobsters not caught in lobster traps have been observed eating one another.
  - (B) Two months is the longest known period during which eight or more lobsters have been trapped together.
  - (C) It is unusual to find as many as eight lobsters caught together in one single trap.
  - (D) Members of other marine species sometimes eat their own kind when no other food sources are available.
  - (E) Any food that the eight lobsters in the trap might have obtained was not enough to ward off hunger.

## Type Two Questions

122. Current maps showing the North American regions where different types of garden plants will flourish are based on weather data gathered 60 years ago from a few hundred primitive weather stations. New maps are now being compiled using computerized data from several thousand modern weather stations and input from home gardeners across North America. These maps will be far more useful.

Each of the following, if true, helps to support the claim that the new maps will be more useful EXCEPT:

- (A) Home gardeners can provide information on plant flourishing not available from weather stations.
- (B) Some of the weather stations currently in use are more than 60 years old.
- (C) Weather patterns can be described more accurately when more information is available.
- (D) Weather conditions are the most important factor in determining where plants will grow.
- (E) Weather patterns have changed in the past 60 years.

123. Studies show that the most creative engineers get their best and most useful ideas only after doodling and jotting down what turn out to be outlandish ideas. Now that many engineers do their work with computers instead of on paper, however, doodling is becoming much less common, and some experts fear that the result will be fewer creative and useful engineering ideas. These experts argue that this undesirable consequence would be avoided if computer programs for engineering work included simulated notepads that would allow engineers to suspend their “serious” work on the computer, type up outlandish ideas, and then quickly return to their original work.

Which one of the following is an assumption on which the experts’ reasoning depends?

- (A) Most creative engineers who work with paper and pencil spend about as much time doodling as they spend on what they consider serious work.
- (B) Simulated notepads would not be used by engineers for any purpose other than typing up outlandish ideas.
- (C) No engineers who work with computers keep paper and pencils near their computers in order to doodle and jot down ideas.
- (D) The physical act of working on paper is not essential in providing engineers with the benefits that can be gained by doodling.
- (E) Most of the outlandish ideas engineers jot down while doodling are later incorporated into projects that have practical applications.

124. Columnist: The relief from the drudgery of physical labor that much modern technology affords its users renders them dependent on this technology, and, more importantly, on the elaborate energy systems required to run it. This leads to a loss of self-sufficiency. Clearly, then, in addition to undermining life’s charm, much modern technology diminishes the overall well-being of its users.

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

- (A) Physical labor is essential to a fulfilling life.
- (B) Self-sufficiency contributes to a person’s well-being.
- (C) People are not free if they must depend on anything other than their own capacities.
- (D) Anything causing a loss in life’s charm is unjustifiable unless this loss is compensated by some gain.
- (E) Technology inherently limits the well-being of its users.

125. Twenty years ago the Republic of Rosinia produced nearly 100 million tons of potatoes, but last year the harvest barely reached 60 million tons. Agricultural researchers, who have failed to develop new higher-yielding strains of potatoes, are to blame for this decrease, since they have been concerned only with their own research and not with the needs of Rosinia.

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

- (A) Any current attempts by agricultural researchers to develop higher-yielding potato strains are futile.
- (B) Strains of potatoes most commonly grown in Rosinia could not have produced the yields last year that they once did.
- (C) Agricultural researchers often find concrete solutions to practical problems when investigating seemingly unrelated questions.
- (D) Wide fluctuations in the size of the potato crop over a twenty-year period are not unusual.
- (E) Agricultural research in Rosinia is funded by government grants.

## Type Two Questions

126. *Salmonella* is a food-borne microorganism that can cause intestinal illness. The illness is sometimes fatal, especially if not identified quickly and treated. Conventional *Salmonella* tests on food samples are slow and can miss unusual strains of the microorganism. A new test identifies the presence or absence of *Salmonella* by the one piece of genetic material common to all strains. Clearly, public health officials would be well advised to replace the previous *Salmonella* tests with the new test.

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

- (A) The level of skill required for laboratory technicians to perform the new test is higher than that required to perform previous tests for *Salmonella*.
- (B) The new test returns results very soon after food samples are submitted for testing.
- (C) A proposed new treatment for *Salmonella* poisoning would take effect faster than the old treatment.
- (D) *Salmonella* poisoning is becoming less frequent in the general population.
- (E) Some remedies for *Salmonella* poisoning also cure intestinal disorders caused by other microorganisms.

127. Even in a democracy, it is necessary to restrict the dissemination of advanced technological knowledge that is of commercial or national-security value. Dissemination to certain countries, those that are or will be competitors or enemies, should be selectively prohibited. There must, however, be free exchange of scientific information.

In order to act in accordance with the position above, it would be necessary to be able to rely on each of the following EXCEPT:

- (A) It is possible to distinguish with confidence, despite any changes in the international environment, friendly or noncompetitive from hostile or competitive nations.
- (B) In a democracy, it is not necessary that the public have detailed knowledge of the country's advanced technology in order, for example, to make informed decisions about the direction public policy should take.
- (C) In most fields of science, basic scientific research is further advanced in countries that are democracies than in countries that are not democracies.
- (D) In each field of science, it is possible to distinguish scientific information from advanced technological knowledge that is of commercial or national-security value.
- (E) In cases where a company that uses advanced technology is a multinational organization, it is possible to keep information about the technology from being passed across designated national boundaries.

## Type Two Questions

128. Current legislation that requires designated sections for smokers and nonsmokers on the premises of privately owned businesses is an intrusion into the private sector that cannot be justified. The fact that studies indicate that nonsmokers might be harmed by inhaling the smoke from others' cigarettes is not the main issue. Rather, the main issue concerns the government's violation of the right of private businesses to determine their own policies and rules.

Which one of the following is a principle that, if accepted, could enable the conclusion to be properly drawn?

- (A) Government intrusion into the policies and rules of private businesses is justified only when individuals might be harmed.
- (B) The right of individuals to breathe safe air supersedes the right of businesses to be free from government intrusion.
- (C) The right of businesses to self-determination overrides whatever right or duty the government may have to protect the individual.
- (D) It is the duty of private businesses to protect employees from harm in the workplace.
- (E) Where the rights of businesses and the duty of government conflict, the main issue is finding a successful compromise.

129. Two alternative drugs are available to prevent blood clots from developing after a heart attack. According to two major studies, drug Y does this no more effectively than the more expensive drug Z, but drug Z is either no more or only slightly more effective than drug Y. Drug Z's manufacturer, which has engaged in questionable marketing practices such as offering stock options to doctors who participate in clinical trials of drug Z, does not contest the results of the studies but claims that they do not reveal drug Z's advantages. However, since drug Z does not clearly treat the problem more effectively than drug Y, there is no established medical reason for doctors to use drug Z rather than drug Y on their heart-attack victims.

Which one of the following principles, if established, would most help to justify a doctor's decision to use drug Z rather than drug Y when treating a patient?

- (A) Only patients to whom the cost of an expensive treatment will not be a financial hardship should receive that treatment rather than a less expensive alternative one.
- (B) Doctors who are willing to assist in research on the relative effectiveness of drugs by participating in clinical trials deserve fair remuneration for that participation.
- (C) The decision to use a particular drug when treating a patient should not be influenced by the marketing practices employed by the company manufacturing that drug.
- (D) A drug company's criticism of studies of its product that do not report favorably on that product is unavoidably biased and therefore invalid.
- (E) Where alternative treatments exist and there is a chance that one is more effective than the other, the possibly more effective one should be employed, regardless of cost.

## Type Two Questions

130. Criminals released from prison on parole have generally been put under routine supervision. A recent program has allowed criminals to leave prison early under intensive supervision; they must obey curfews and in some cases they must be electronically monitored. The percentage of released criminals arrested while under supervision is the same for intensive supervision as for routine supervision, so intensive supervision is no more effective than routine supervision in preventing criminals from committing additional crimes.

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

- (A) The criminals under intensive supervision, but not those under routine supervision, were required to work or attend school during their supervision period.
  - (B) All of the criminals who were arrested while under routine supervision had been in prison more than once before being paroled and put under supervision.
  - (C) The proportion of arrests to crimes committed was not significantly higher for criminals under intensive supervision than for those under routine supervision.
  - (D) Of the criminals arrested while under intensive supervision, some would not have committed crimes if they had been under routine supervision.
  - (E) The number of criminals put under routine supervision was not significantly greater than the number of criminals put under intensive supervision.
131. Some critics of space exploration programs claim that they are too costly to be justified. Moreover, there is the very real risk of a debilitating explosion—most experts say something like a 1-in-70 chance per flight. Budgetary pressures to make the programs cheaper only serve to undermine safety: one program's managers uncovered a series of manufacturing flaws that critics contend are a direct consequence of the pressure to produce results as quickly and cheaply as possible. The passage conforms most closely to which one of the following propositions?
- (A) Attempts to solve one problem can lead to the exacerbation of another problem.
  - (B) Safety risks are sometimes ignored in the name of scientific progress.
  - (C) Safety is often sacrificed in order to reach a goal as quickly as possible.
  - (D) Bureaucratic mistakes can lead to quality reduction and inefficiency.
  - (E) Space exploration is too dangerous to be continued.

132. The symptoms of mental disorders are behavioral, cognitive, or emotional problems. Some patients with mental disorders can be effectively treated with psychotherapy. But it is now known that in some patients mental disorders result from chemical imbalances affecting the brain. Thus these patients can be effectively treated only with medication that will reduce or correct the imbalance.

The argument depends on assuming which one of the following?

- (A) Treatment by psychotherapy can produce no effective reduction in or correction of chemical imbalances that cause mental disorders.
  - (B) Treatment with medication always shows faster results for patients with mental disorders than does treatment with psychotherapy.
  - (C) Most mental disorders are not the result of chemical imbalances affecting the brain.
  - (D) Medication is always more effective in treating patients with mental disorders than is psychotherapy.
  - (E) Treatment with psychotherapy has no effect on mental disorders other than a reduction of the symptoms.
133. The human brain and its associated mental capacities evolved to assist self-preservation. Thus, the capacity to make aesthetic judgments is an adaptation to past environments in which humans lived. So an individual's aesthetic judgments must be evaluated in terms of the extent to which they promote the survival of that individual.

Which one of the following is a principle that would, if valid, provide the strongest justification for the reasoning above?

- (A) All human adaptations to past environments were based on the human brain and its associated mental capacities.
- (B) Human capacities that do not contribute to the biological success of the human species cannot be evaluated.
- (C) If something develops to serve a given function, the standard by which it must be judged is how well it serves that function.
- (D) Judgments that depend on individual preference or taste cannot be evaluated as true or false.
- (E) Anything that enhances the proliferation of a species is to be valued highly.

## Type Two Questions

134. Editorial: This political party has repeatedly expressed the view that increasing spending on education is a worthy goal. On other occasions, however, the same party has claimed that the government should not increase spending on education. So this party's policy is clearly inconsistent.

The argument in the editorial depends on assuming which one of the following?

- (A) It is inconsistent for a legislator both to claim that increasing spending on education is a worthy goal and to vote against increasing spending on education.
- (B) A consistent course of action in educational policy is usually the course of action that will reduce spending on education in the long run.
- (C) Even if a goal is a morally good one, one should not necessarily try to achieve it.
- (D) A consistent political policy does not hold that an action that comprises a worthy goal should not be performed.
- (E) Members of one political party never have inconsistent views on how to best approach a political issue.

135. In a mature tourist market such as Bellaria there are only two ways hotel owners can increase profits: by building more rooms or by improving what is already there. Rigid land-use laws in Bellaria rule out construction of new hotels or, indeed, any expansion of hotel capacity. It follows that hotel owners cannot increase their profits in Bellaria since Bellarian hotels\_\_\_\_\_.

Which one of the following logically completes the argument?

- (A) are already operating at an occupancy rate approaching 100 percent year-round
- (B) could not have been sited any more attractively than they are even in the absence of land-use laws
- (C) have to contend with upward pressures on the cost of labor which stem from an incipient shortage of trained personnel
- (D) already provide a level of luxury that is at the limits of what even wealthy patrons are prepared to pay for
- (E) have shifted from serving mainly Bellarian tourists to serving foreign tourists traveling in organized tour groups

136. Citizen of Mooresville: Mooresville's current city council is having a ruinous effect on municipal finances. Since a majority of the incumbents are running for reelection, I am going to campaign against all these incumbents in the upcoming city council election. The only incumbent I will support and vote for is the one who represents my own neighborhood, because she has the experience necessary to ensure that our neighborhood's interests are served. If everyone in Mooresville would follow my example, we could substantially change the council's membership.

Assuming that each citizen of Mooresville is allowed to vote only for a city council representative from his or her own neighborhood, for the council's membership to be changed substantially, it must be true that

- (A) at least some other voters in Mooresville do not make the same exception for their own incumbent in the upcoming election
- (B) most of the eligible voters in Mooresville vote in the upcoming election
- (C) few of the incumbents on the Mooresville city council have run for reelection in previous elections
- (D) all of the seats on the Mooresville city council are filled by incumbents whose terms are expiring
- (E) none of the challengers in the upcoming election for seats on Mooresville's city council are better able to serve the interests of their neighborhoods than were the incumbents

137. Grow-Again ointment is a proven treatment for reversing male hereditary baldness. Five drops daily is the recommended dose, and exceeding this quantity does not increase the product's effectiveness. Therefore, offering a manufacturer's rebate on the purchase price of Grow-Again will not increase sales and consequently would be unprofitable for the manufacturer.

Which one of the following, if true, would most strengthen the argument?

- (A) When using an ointment, people tend to believe that applying it in greater quantities can make it more effective.
- (B) Grow-Again is more effective on some of the men who use it than it is on others.
- (C) The rebate, if offered, would not attract purchasers who otherwise might not use Grow-Again.
- (D) Baldness in men can be caused by a variety of factors, only one of which is heredity.
- (E) Grow-Again is a product whose per-unit manufacturing cost does not fall significantly when the product is produced in large quantities.

## Type Two Questions

### Questions 76–77

Political opinion and analysis outside the mainstream rarely are found on television talk shows, and it might be thought that this state of affairs is a product of the political agenda of the television stations themselves. In fact, television stations are driven by the same economic forces as sellers of more tangible goods. Because they must attempt to capture the largest possible share of the television audience for their shows, they air only those shows that will appeal to large numbers of people. As a result, political opinions and analyses aired on television talk shows are typically bland and innocuous.

138. An assumption made in the explanation offered by the author of the passage is that
- (A) most television viewers cannot agree on which elements of a particular opinion or analysis are most disturbing
  - (B) there are television viewers who might refuse to watch television talk shows that they knew would be controversial and disturbing
  - (C) each television viewer holds some opinion that is outside the political mainstream, but those opinions are not the same for everyone
  - (D) there are television shows on which economic forces have an even greater impact than they do on television talk shows
  - (E) the television talk shows of different stations resemble one another in most respects
139. The explanation offered by the author of the passage makes the assumption that
- (A) television station executives usually lack a political agenda of their own
  - (B) bland and innocuous political opinions and analyses are generally in the mainstream
  - (C) political analysts outside the mainstream are relatively indifferent to the effect their analyses have on television viewers
  - (D) most television viewers are prepared to argue against allowing the expression of political opinions and analyses with which they disagree
  - (E) the political opinions of television station executives are not often reflected in the television shows their stations produce

140. Eva: A “smart highway” system should be installed, one that would monitor areawide traffic patterns and communicate with computers in vehicles or with programmable highway signs to give drivers information about traffic congestion and alternate routes. Such a system, we can infer, would result in improved traffic flow in and around cities that would do more than improve drivers’ tempers; it would decrease the considerable loss of money and productivity that now results from traffic congestion.

Luis: There are already traffic reports on the radio. Why would a “smart highway” system be any better?

If Eva responded to Luis by saying that the current one-minute radio reports are too short to give a sufficient description of overall patterns of traffic congestion, which one of the following, if true, would most strengthen Luis’s challenge?

- (A) Bad weather, which radio stations report, would cause traffic to slow down whether or not a “smart highway” system was in operation.
- (B) It would be less costly to have radio stations that give continual, lengthier traffic reports than to install a “smart highway” system.
- (C) Radio reports can take note of congestion once it occurs, but a “smart highway” system could anticipate and forestall it in many instances.
- (D) The proposed traffic monitoring would not reduce the privacy of drivers.
- (E) Toll collection booths, which constitute traffic bottlenecks, would largely be replaced in the “smart highway” system by electronic debiting of commuters’ accounts while traffic proceeded at full speed.

## Type Two Questions

141. When a group of children who have been watching television programs that include acts of violence is sent to play with a group of children who have been watching programs that do not include acts of violence, the children who have been watching violent programs commit a much greater number of violent acts in their play than do the children who have been watching nonviolent programs. Therefore, children at play can be prevented from committing violent acts by not being allowed to watch violence on television.

The argument in the passage assumes which one of the following?

- (A) Television has a harmful effect on society.
- (B) Parents are responsible for the acts of their children.
- (C) Violent actions and passive observation of violent actions are not related.
- (D) There are no other differences between the two groups of children that might account for the difference in violent behavior.
- (E) Children who are treated violently will respond with violence.

142. Zoologist: Animals can certainly signal each other with sounds and gestures. However, this does not confirm the thesis that animals possess language, for it does not prove that animals possess the ability to use sounds or gestures to refer to concrete objects or abstract ideas.

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

- (A) Animals do not have the cognitive capabilities to entertain abstract ideas.
- (B) If an animal's system of sounds or gestures is not a language, then that animal is unable to entertain abstract ideas.
- (C) When signaling each other with sounds or gestures, animals refer neither to concrete objects nor abstract ideas.
- (D) If a system of sounds or gestures contains no expressions referring to concrete objects or abstract ideas, then that system is not a language.
- (E) Some animals that possess a language can refer to both concrete objects and abstract ideas.

143. Selena: Asteroid impact on the Earth caused the extinction of the dinosaurs by raising vast clouds of dust, thus blocking the Sun's rays and cooling the planet beyond the capacity of the dinosaurs, or perhaps the vegetation that supported them, to adapt. A worldwide dust layer provides evidence of asteroid impact at approximately the correct time, and a huge crater exists on the edge of the Yucatan peninsula in Mexico.

Trent: That asteroid crater is not large enough for the requisite amount of dust to have been produced. Besides, the extinction of dinosaur species took many years, not just one or two. So the extinctions must have been due not to asteroid impact on the Earth but to some other kind of cause.

Trent's argument assumes that

- (A) any collision of an asteroid with the Earth would have occurred on a land area rather than an ocean
- (B) dinosaurs in the neighborhood of an asteroid impact but not within the zone of direct impact would have survived such an impact
- (C) any event that takes place over a long period of time has many different kinds of causes
- (D) dust from the impact of an asteroid on the Earth would not have had any cooling effect on the climate
- (E) no more than one large asteroid struck the Earth during the period when the dinosaurs were becoming extinct

## Type Two Questions

144. No one knows what purposes, if any, dreams serve, although there are a number of hypotheses. According to one hypothesis, dreams are produced when the brain is erasing “parasitic connections” (meaningless, accidental associations between ideas), which accumulate during the day and which would otherwise clog up our memories. Interestingly, the only mammal that does not have rapid eye movement sleep, in which we humans typically have our most vivid dreams, is the spiny anteater, which has been seen as anomalous in that it has a very large brain relative to the animal’s size. This fact provides some confirmation for the parasitic-connection hypothesis, since the hypothesis predicts that for an animal that did not dream to have an effective memory that animal would need extra memory space for the parasitic connections.

The reasoning in the argument most closely conforms to which one of the following principles?

- (A) Facts about one species of animal can provide confirmation for hypotheses about all species that are similar in all relevant respects to the particular species in question.
- (B) A hypothesis from which several predictions can be drawn as logical conclusions is confirmed only when the majority of these predictions turn out to be true.
- (C) A hypothesis about the purpose of an action or object is confirmed when it is shown that the hypothesized purpose is achieved with the help of the action or object and could not be achieved without that action or object.
- (D) A hypothesis is partially confirmed whenever a prediction derived from that hypothesis provides an explanation for an otherwise unexplained set of facts.
- (E) When several competing hypotheses exist, one of them is confirmed only when it makes a correct prediction that its rivals fail to make.

145. About two million years ago, lava dammed up a river in western Asia and caused a small lake to form. The lake existed for about half a million years. Bones of an early human ancestor were recently found in the ancient lake-bottom sediments that lie on top of the layer of lava. Therefore, ancestors of modern humans lived in western Asia between two million and one-and-a-half million years ago.

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

- (A) There were no other lakes in the immediate area before the lava dammed up the river.
- (B) The lake contained fish that the human ancestors could have used for food.
- (C) The lava that lay under the lake-bottom sediments did not contain any human fossil remains.
- (D) The lake was deep enough that a person could drown in it.
- (E) The bones were already in the sediments by the time the lake dried up.

146. School superintendent: It is a sad fact that, until now, entry into the academically best high school in our district has been restricted to the children of people who were wealthy enough to pay the high tuition. Parents who were previously denied the option of sending their children to this school now have this option, since I am replacing the tuition requirement with a requirement that allows only those who live in the neighborhood of the school to attend.

The superintendent’s claim about the effect of replacing the tuition requirement relies on the assumption that

- (A) the residents of the school’s neighborhood tend to be wealthy
- (B) people other than those wealthy enough to have paid the old tuition are able to live in the neighborhood of the school
- (C) people less wealthy than those who were able to pay the old tuition are in the majority in the district
- (D) there are no high schools in the district other than the one referred to by the superintendent
- (E) there are many people not wealthy enough to have paid the old tuition who wish to have their children attend the school

## Type Two Questions

147. Researcher: The role of chemicals called pheromones in determining the sexual behavior of some animals is well documented. But, even though humans also produce these chemicals, it is clear that psychological factors have taken over this role in us. Whereas for animals these behaviors are involuntary, which is a clear sign of chemical control, humans, by virtue of their free will, choose how they behave, and thus psychological factors take over. So pheromones are merely a vestige of our evolutionary past.

The researcher's argument requires the assumption that

- (A) whatever does not have a chemical explanation must have a purely psychological one
- (B) voluntary action cannot have a chemical explanation
- (C) free will can be found only in humans
- (D) voluntary action cannot have an evolutionary explanation
- (E) there is a psychological explanation for the continuing presence of pheromones in humans

148. Psychologists today recognize childhood as a separate stage of life which can only be understood in its own terms, and they wonder why the Western world took so long to see the folly of regarding children simply as small, inadequately socialized adults. Most psychologists, however, persist in regarding people 70 to 90 years old as though they were 35 year olds who just happen to have white hair and extra leisure time. But old age is as fundamentally different from young adulthood and middle age as childhood is—a fact attested to by the organization of modern social and economic life. Surely it is time, therefore, to acknowledge that serious research into the unique psychology of advanced age has become indispensable.

Which one of the following principles, if established, would provide the strongest backing for the argument?

- (A) Whenever current psychological practice conflicts with traditional attitudes toward people, those traditional attitudes should be changed to bring them in line with current psychological practice.
- (B) Whenever two groups of people are so related to each other that any member of the second group must previously have been a member of the first, people in the first group should not be regarded simply as deviant members of the second group.
- (C) Whenever most practitioners of a given discipline approach a particular problem in the same way, that uniformity is good evidence that all similar problems should also be approached in that way.
- (D) Whenever a society's economic life is so organized that two distinct times of life are treated as being fundamentally different from one another, each time of life can be understood only in terms of its own distinct psychology.
- (E) Whenever psychologists agree that a single psychology is inadequate for two distinct age groups, they should be prepared to show that there are greater differences between the two age groups than there are between individuals in the same age group.

## Type Two Questions

149. When a group of people starts a company, the founders usually serve as sources both of funding and of skills in marketing, management, and technical matters. It is unlikely that a single individual can both provide adequate funding and be skilled in marketing, management, and technical matters. Therefore, companies founded by groups are more likely to succeed than companies founded by individuals.

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

- (A) A new company is more likely to succeed if every founding member contributes equally to the company's initial funding than if some members contribute more funds than others.
- (B) Some founding members of successful companies can provide both funding and skills in marketing, management, or technical matters.
- (C) New companies are more likely to succeed when their founders can provide adequate funding and skills in marketing, management, and technical abilities than if they must secure funding or skills from nonfounders.
- (D) Founders of a new company can more easily acquire marketing and management abilities than technical abilities.
- (E) A new company is more likely to succeed if its technical experts are also skilled in management and marketing than if they lack management or marketing skills.

150. In a bureaucracy, all decisions are arrived at by a process that involves many people. There is no one person who has the authority to decide whether a project will proceed or not. As a consequence, in bureaucracies, risky projects are never undertaken.

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

- (A) All projects in a bureaucracy require risk.
- (B) Decisive individuals choose not to work in a bureaucracy.
- (C) An individual who has decision-making power will take risks.
- (D) The only risky projects undertaken are those for which a single individual has decision-making power.
- (E) People sometimes take risks as individuals that they would not take as part of a group.

151. A university should not be entitled to patent the inventions of its faculty members. Universities, as guarantors of intellectual freedom, should encourage the free flow of ideas and the general dissemination of knowledge. Yet a university that retains the right to patent the inventions of its faculty members has a motive to suppress information about a potentially valuable discovery until the patent for it has been secured. Clearly, suppressing information concerning such discoveries is incompatible with the university's obligation to promote the free flow of ideas.

Which one of the following is an assumption that the argument makes?

- (A) Universities are the only institutions that have an obligation to guarantee intellectual freedom.
- (B) Most inventions by university faculty members would be profitable if patented.
- (C) Publication of reports on research is the only practical way to disseminate information concerning new discoveries.
- (D) Universities that have a motive to suppress information concerning discoveries by their faculty members will occasionally act on that motive.
- (E) If the inventions of a university faculty member are not patented by that university, then they will be patented by the faculty member instead.

152. Millions of irreplaceable exhibits in natural history museums are currently allowed to decay. Yet without analyses of eggs from museums, the studies linking pesticides with the decline of birds of prey would have been impossible. Therefore, funds must be raised to preserve at least those exhibits that will be most valuable to science in the future.

The argument presupposes that

- (A) if a museum exhibit is irreplaceable, its preservation is of an importance that overrides economic considerations
- (B) the scientific analysis of museum exhibits can be performed in a nondestructive way
- (C) eggs of extinct species should be analyzed to increase knowledge of genetic relationships among species
- (D) it can be known at this time what data will be of most use to scientific investigators in the future
- (E) the decay of organic material in natural history exhibits is natural and cannot be prevented

## Type Two Questions

153. Toddlers are not being malicious when they bite people. For example, a child may want a toy, and feel that the person he or she bites is preventing him or her from having it.

The situation as described above most closely conforms to which one of the following generalizations?

- (A) Biting people is sometimes a way for toddlers to try to solve problems.
- (B) Toddlers sometimes engage in biting people in order to get attention from adults.
- (C) Toddlers mistakenly believe that biting people is viewed as acceptable behavior by adults.
- (D) Toddlers do not recognize that by biting people they often thwart their own ends.
- (E) Resorting to biting people is in some cases an effective way for toddlers to get what they want.

154. Thirty years ago, the percentage of their income that single persons spent on food was twice what it is today. Given that incomes have risen over the past thirty years, we can conclude that incomes have risen at a greater rate than the price of food in that period.

Which one of the following, if assumed, helps most to justify the conclusion drawn above?

- (A) The amount of food eaten per capita today is identical to the amount of food eaten per capita thirty years ago.
- (B) In general, single persons today eat healthier foods and eat less than their counterparts of thirty years ago.
- (C) Single persons today, on average, purchase the same kinds of food items in the same quantities as they did thirty years ago.
- (D) The prices of nonfood items single persons purchase have risen faster than the price of food over the past thirty years.
- (E) Unlike single persons, families today spend about the same percentage of their income on food as they did thirty years ago.

155. Advertisement: Clark brand-name parts are made for cars manufactured in this country. They satisfy all of our government automotive tests—the toughest such tests in the world. With foreign-made parts, you never know which might be reliable and which are cheap look-alikes that are poorly constructed and liable to cost you hundreds of dollars in repairs. Therefore, be smart and insist on brand-name parts by Clark for your car.

The argument requires the assumption that

- (A) Clark parts are available only in this country
- (B) foreign-made parts are not suitable for cars manufactured in this country
- (C) no foreign-made parts satisfy our government standards
- (D) parts that satisfy our government standards are not as poorly constructed as cheap foreign-made parts
- (E) if parts are made for cars manufactured in our country, they are not poorly constructed

156. If the public library shared by the adjacent towns of Redville and Glenwood were relocated from the library's current, overcrowded building in central Redville to a larger, available building in central Glenwood, the library would then be within walking distance of a larger number of library users. That is because there are many more people living in central Glenwood than in central Redville, and people generally will walk to the library only if it is located close to their homes.

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

- (A) The public library was located between Glenwood and Redville before being moved to its current location in central Redville.
- (B) The area covered by central Glenwood is approximately the same size as that covered by central Redville.
- (C) The building that is available in Glenwood is smaller than an alternative building that is available in Redville.
- (D) Many of the people who use the public library do not live in either Glenwood or Redville.
- (E) The distance that people currently walk to get to the library is farther than what is generally considered walking distance.

## Type Two Questions

157. How do the airlines expect to prevent commercial plane crashes? Studies have shown that pilot error contributes to two-thirds of all such crashes. To address this problem, the airlines have upgraded their training programs by increasing the hours of classroom instruction and emphasizing communication skills in the cockpit. But it is unrealistic to expect such measures to compensate for pilots' lack of actual flying time. Therefore, the airlines should rethink their training approach to reducing commercial crashes.

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

- (A) Training programs can eliminate pilot errors.
- (B) Commercial pilots routinely undergo additional training throughout their careers.
- (C) The number of airline crashes will decrease if pilot training programs focus on increasing actual flying time.
- (D) Lack of actual flying time is an important contributor to pilot error in commercial plane crashes.
- (E) Communication skills are not important to pilot training programs.

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

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

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

159. A fourteen-year study of finches on the Galapagos islands concluded that there is a definite relationship between climate and the population size of finch species that thrive at various times. During droughts, more members of large finch species survive because their bills are large enough to crack large, hard seeds, giving them a food supply unavailable to smaller birds. In rainy years, fewer members of the large finch species survive because the additional moisture fosters the growth of plants that produce small seeds. The larger finch varieties have to consume enormous numbers of small seeds to meet their energy demands, and some just cannot eat them fast enough.

Which one of the following must be assumed in order to justify the conclusion that climatic variations cause a major difference in survival rates of small and large finches?

- (A) During drought conditions, the weather promotes the growth of plants that produce small, hard seeds.
- (B) A lengthy period of rainy weather results in fewer large, hard seeds being produced.
- (C) In rainy periods, the small finches gather enough food to grow much larger and heavier, but their ultimate size is limited by their inability to eat small seeds fast.
- (D) The Galapagos climate during this fourteen-year period had about as much dry weather as it had wet weather.
- (E) Small seeds do not have to be cracked open in order to be digested by any of the finch varieties.

160. It is the mark of a superior conductor that he or she has the authority to insist, even with a top orchestra, that rehearsal work must be intensified. This authority cannot simply be claimed; the conductor must earn it by winning the orchestra's respect for the artistic interpretations he or she is currently pursuing.

In taking the position outlined, the author presupposes which one of the following?

- (A) Superior conductors devise different interpretations of a composition for each orchestra with which they perform it.
- (B) Superior conductors are perfectionists who are never satisfied with any performance even by a top orchestra.
- (C) Top orchestras are always ready to put in additional work on rehearsals if the conductor considers additional rehearsing necessary.
- (D) Top orchestras can appreciate the merits of an interpretation even before they have brought it to full realization.
- (E) Even top orchestras are not always led by superior conductors.

## Type Two Questions

161. In casual conversation, people experience little psychological discomfort in admitting that they have some particular character flaw, but only if they consider trivial the flaw to which they admit. Therefore, if in a casual conversation an individual readily admits that he or she has some particular character flaw, the individual must not consider that flaw to be serious.

Which one of the following is an assumption necessary to the argument?

- (A) Most character flaws are considered trivial by those who have them.
- (B) People admit to having only those character flaws that most other people consider trivial.
- (C) In casual conversation, people admit to having character flaws only when they must.
- (D) In casual conversation, people readily admit to having a character flaw only when that admission causes them little psychological discomfort.
- (E) In casual conversation, people do not speak of things that would give others an unfavorable impression of their character.

162. In our solar system only one of the nine planets—Earth—qualifies as fit to sustain life. Nonetheless, using this ratio, and considering the astonishingly large number of planetary systems in the universe, we must conclude that the number of planets fit to sustain some form of life is extremely large.

The argument is questionable because it presumes which one of the following without providing justification?

- (A) If a planet is Earthlike, then life will arise on it.
- (B) Our solar system is similar to many other planetary systems in the universe.
- (C) The conditions necessary for life to begin are well understood.
- (D) Life similar to Earth's could evolve under conditions very different from those on Earth.
- (E) Most other planetary systems in the universe have nine planets.

163. In their native habitat, amaryllis plants go dormant when the soil in which they are growing dries out during the dry season. Therefore, if amaryllis plants kept as houseplants are to thrive, water should be withheld from them during part of the year so that the plants go dormant.

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

- (A) Most kinds of plants go dormant at some time or other during the year.
- (B) Amaryllis are more difficult to keep as houseplants than other kinds of plants are.
- (C) Water should be withheld from amaryllis plants kept as houseplants during the exact time of year that corresponds to the dry season in their native habitat.
- (D) Any amaryllis plant that fails to thrive is likely to have been dormant for too short a time.
- (E) Going dormant benefits amaryllis plants in their native habitat in some way other than simply preventing death during overly dry periods.

164. During the recent economic downturn, banks contributed to the decline by loaning less money. Prior to the downturn, regulatory standards for loanmaking by banks were tightened. Clearly, therefore, banks will lend more money if those standards are relaxed.

The argument assumes that

- (A) the downturn did not cause a significant decrease in the total amount of money on deposit with banks which is the source of funds for banks to lend
- (B) the imposition of the tighter regulatory standards was not a cause of the economic downturn
- (C) the reason for tightening the regulatory standards was not arbitrary
- (D) no economic downturn is accompanied by a significant decrease in the amount of money loaned out by banks to individual borrowers and to businesses
- (E) no relaxation of standards for loanmaking by banks would compensate for the effects of the downturn

## Type Two Questions

165. There are rumors that the Premier will reshuffle the cabinet this week. However, every previous reshuffle that the Premier has made was preceded by meetings between the Premier and senior cabinet members. No such meetings have occurred or are planned. Therefore the rumors are most likely false.

Which one of the following most accurately expresses a principle of reasoning employed by the argument?

- (A) When a conclusion follows logically from a set of premises, the probability that the conclusion is true cannot be any less than the probability that the premises are all true.
- (B) A hypothesis is undermined when a state of affairs does not obtain that would be expected to obtain if the hypothesis were true.
- (C) It is possible for a hypothesis to be false even though it is supported by all the available data.
- (D) Even if in the past a phenomenon was caused by particular circumstances, it is erroneous to assume that the phenomenon will recur only under the circumstances in which it previously occurred.
- (E) If two statements are known to be inconsistent with each other and if one of the statements is known to be false, it cannot be deduced from these known facts that the other statement is true.

166. The National Association of Fire Fighters says that 45 percent of homes now have smoke detectors, whereas only 30 percent of homes had them 10 years ago. This makes early detection of house fires no more likely, however, because over half of the domestic smoke detectors are either without batteries or else inoperative for some other reason.

In order for the conclusion above to be properly drawn, which one of the following assumptions would have to be made?

- (A) Fifteen percent of domestic smoke detectors were installed less than 10 years ago.
- (B) The number of fires per year in homes with smoke detectors has increased.
- (C) Not all of the smoke detectors in homes are battery operated.
- (D) The proportion of domestic smoke detectors that are inoperative has increased in the past ten years.
- (E) Unlike automatic water sprinklers, a properly functioning smoke detector cannot by itself increase fire safety in a home.

167. A certain experimental fungicide causes no harm to garden plants, though only if it is diluted at least to ten parts water to one part fungicide. Moreover, this fungicide is known to be so effective against powdery mildew that it has the capacity to eliminate it completely from rose plants. Thus this fungicide, as long as it is sufficiently diluted, provides a means of eliminating powdery mildew from rose plants that involves no risk of harming the plants.

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

- (A) There is not an alternative method, besides application of this fungicide, for eliminating powdery mildew from rose plants without harming the plants.
- (B) When the fungicide is sufficiently diluted, it does not present any risk of harm to people, animals, or beneficial insects.
- (C) Powdery mildew is the only fungal infection that affects rose plants.
- (D) If a fungicide is to be effective against powdery mildew on rose plants, it must eliminate the powdery mildew completely.
- (E) The effectiveness of the fungicide does not depend on its being more concentrated than one part in ten parts of water.

168. Marine biologists have long thought that variation in the shell color of aquatic snails evolved as a protective camouflage against birds and other predators. Brown shells seem to be more frequent when the underlying seafloor is dark-colored and white shells more frequent when the underlying seafloor is light-colored. A new theory has been advanced, however, that claims that shell color is related to physiological stress associated with heat absorption. According to this theory, brown shells will be more prevalent in areas where the wave action of the sea is great and thus heat absorption from the Sun is minimized, whereas white shells will be more numerous in calmer waters where the snails will absorb more heat from the Sun's rays.

Evidence that would strongly favor the new theory over the traditional theory would be the discovery of a large majority of

- (A) dark-shelled snails in a calm inlet with a dark, rocky bottom and many predators
- (B) dark-shelled snails in a calm inlet with a white, sandy bottom
- (C) light-shelled snails in an inlet with much wave action and a dark, rocky bottom
- (D) light-shelled snails in a calm inlet with a dark, rocky bottom and many predators
- (E) light-shelled snails in a calm inlet with a white, sandy bottom and many predators

## Type Two Questions

169. Some works of art that today are recognized masterpieces were considered obscene when first created. It therefore follows that what is considered obscene or not obscene has changed over time.

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

- (A) Displays of works of art that are considered obscene change the way in which obscenity is defined.
- (B) The number of things that are considered obscene has decreased with the passage of time.
- (C) Public opinion does not determine the artistic value of a work of art.
- (D) Not all currently recognized masterpieces that were once considered obscene are still considered obscene.
- (E) All currently recognized masterpieces have at one time been considered obscene.

170. The retina scanner, a machine that scans the web of tiny blood vessels in the retina, stores information about the pattern formed by the blood vessels. This information allows it to recognize any pattern it has previously scanned. No two eyes have identical patterns of blood vessels in the retina. A retina scanner can therefore be used successfully to determine for any person whether it has ever scanned a retina of that person before.

The reasoning in the argument depends upon assuming that

- (A) diseases of the human eye do not alter the pattern of blood vessels in the retina in ways that would make the pattern unrecognizable to the retina scanner
- (B) no person has a different pattern of blood vessels in the retina of the left eye than in the retina of the right eye
- (C) there are enough retina scanners to store information about every person's retinas
- (D) the number of blood vessels in the human retina is invariant, although the patterns they form differ from person to person
- (E) there is no person whose retinas have been scanned by two or more different retina scanners

171. Some people claim that every human discovery or invention is an instance of self-expression. But what they seem to ignore is that, trivially, anything we do is self-expressive. So, until they can give us a more interesting interpretation of their claim, we are not obliged to take their claim seriously.

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

- (A) All claims that are trivial are uninteresting.
- (B) Most people do not take trivial claims seriously.
- (C) No claims that are trivial are worthy of serious consideration.
- (D) Every claim is open to both interesting and uninteresting interpretations.
- (E) Every interpretation is either trivial or uninteresting.

172. Supervisor: Our next budget proposal will probably be approved, because normally about half of all budget proposals that the vice president considers are approved, and our last five budget proposals have all been turned down.

The supervisor's reasoning is flawed because it presumes, without giving warrant, that

- (A) the last five budget proposals' having been turned down guarantees that the next five budget proposals will be approved
- (B) the vice president is required to approve at least half of all budget proposals submitted
- (C) having the last five budget proposals turned down affects the likelihood that the next budget proposal will be turned down
- (D) the majority of the last five budget proposals deserved to be turned down
- (E) the likelihood that a budget proposal will be approved is influenced by the amount of money that budget proposal requests

## Type Two Questions

173. Railroad spokesperson: Of course it is a difficult task to maintain quality of service at the same time that the amount of subsidy the taxpayers give the railroad network is reduced. Over recent years, however, the number of passengers has increased in spite of subsidy reductions. This fact leads to the conclusion that our quality of service has been satisfactory.

The spokesperson's argument is based on which one of the following assumptions?

- (A) Taxpayers do not wish to have their taxes raised to subsidize the railroads.
  - (B) Some people refuse to travel by train if they are dissatisfied with the quality of service.
  - (C) The quality of service on the trains must have improved in spite of subsidy reductions.
  - (D) It is impossible to reduce subsidies to the railroad network without some effect on the quality of service.
  - (E) The increase in the number of passengers will increase revenue sufficiently to offset the subsidy reductions.
174. Since Mayor Drabble always repays her political debts as soon as possible, she will almost certainly appoint Lee to be the new head of the arts commission. Lee has wanted that job for a long time, and Drabble owes Lee a lot for his support in the last election.
- Which one of the following is an assumption on which the argument depends?
- (A) Mayor Drabble has no political debt that is both of longer standing than the one she owes to Lee and could as suitably be repaid by an appointment to be the new head of the arts commission.
  - (B) There is no one to whom Mayor Drabble owes a greater political debt for support in the last election than the political debt she owes to Lee.
  - (C) Lee is the only person to whom Mayor Drabble owes a political debt who would be willing to accept an appointment from her as the new head of the arts commission.
  - (D) Whether Lee is qualified to head the arts commission is irrelevant to Mayor Drabble's decision.
  - (E) The only way that Mayor Drabble can adequately repay her political debt to Lee is by appointing him to head the arts commission.

175. Mr. Blatt: Expert consultants are sought after by management because they help executives make better decisions. That is why they are worth the substantial fees they charge.

Ms. Fring: Nonsense. Expert consultants are hired in order to enable executives to avoid responsibility. The more the experts cost, the more they can be blamed when things go wrong.

Which one of the following, if it occurred, would be the strongest evidence favoring Ms. Fring's position over Mr. Blatt's position?

- (A) A company that is trying to decide whether to move its manufacturing plant hires an expensive expert to conduct a cost/benefit analysis.
- (B) Two competing companies faced with very similar problems adopt different solutions, one with the help of a consultant, one without.
- (C) A successful firm of expert consultants seeks to increase its volume of business by reducing its fees, but its volume of business drops.
- (D) An expert consultant builds up a successful business by charging clients a substantial percentage of the amount an independent assessor judges that the consultant saved the company.
- (E) A company follows a consultant's advice to open two new stores, but both stores are only marginally profitable at first.

## Type Two Questions

176. New evidence suggests that the collapse of Egypt's old kingdom some 4,000 years ago was caused by environmental catastrophe rather than internal social upheaval. Ocean sediments reveal a period of global cooling at the time, a condition generally associated with extended droughts. There were, no doubt, serious social problems in Egypt at the time, but they resulted from a severe dry spell.

Which one of the following, if true, would most strengthen the argument?

- (A) Historically, most civilizations have succumbed to internal strife rather than external factors.
- (B) The social problems in Egypt's old kingdom at the time of its collapse were serious enough to have caused the collapse.
- (C) At the time of the collapse of the old kingdom, several isolated but well-established civilizations near Egypt underwent sudden declines.
- (D) Egyptian records recovered from the time of the collapse explicitly refer to the deteriorating conditions of the society.
- (E) Shortly after the collapse of the old kingdom, Egypt was thrust into a civil war that lasted most of the next two centuries.

177. Nuclear reactors are sometimes built in "geologically quiet" regions, so called by geologists because such regions are distant from plate boundaries and contain only minor faults. Since no minor fault in a geologically quiet region produces an earthquake more often than once in any given 100,000-year period, it follows that of all potential nuclear reactor sites in such a region, those that are least likely to be struck by an earthquake are ones located near a fault that has produced an earthquake within living memory.

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

- (A) Geologically quiet regions are the least dangerous regions in which to build nuclear reactors.
- (B) For any potential nuclear reactor site, the likelihood of being struck by an earthquake is the primary determinant of site safety.
- (C) In a geologically quiet region, every potential nuclear reactor site is near at least one minor fault.
- (D) Nuclear reactors that are located in geologically quiet regions are built to withstand at least one but not necessarily more than one earthquake of minor to moderate force.
- (E) Earthquake faults in geologically quiet regions produce earthquakes at least once in 100,000 years.

## Type Two Questions

178. A recent study concludes that prehistoric birds, unlike modern birds, were cold-blooded. This challenges a widely held view that modern birds descended from warm-blooded birds. The conclusion is based on the existence of growth rings in prehistoric birds' bodily structures, which are thought to be found only in cold-blooded animals. Another study, however, disputes this view. It concludes that prehistoric birds had dense blood vessels in their bones, which suggests that they were active creatures and therefore had to be warm-blooded.

Which one of the following, if true, would most help to resolve the dispute described above in favor of one party to it?

- (A) Some modern warm-blooded species other than birds have been shown to have descended from cold-blooded species.
- (B) Having growth rings is not the only physical trait of cold-blooded species.
- (C) Modern birds did not evolve from prehistoric species of birds.
- (D) Dense blood vessels are not found in all warm-blooded species.
- (E) In some cold-blooded species the gene that is responsible for growth rings is also responsible for dense blood vessels.

179. Magazine editor: I know that some of our regular advertisers have been pressuring us to give favorable mention to their products in our articles, but they should realize that for us to yield to their wishes would actually be against their interests. To remain an effective advertising vehicle we must have loyal readership, and we would soon lose that readership if our readers suspect that our editorial integrity has been compromised by pandering to advertisers.

Advertising-sales director: You underestimate the sophistication of our readers. They recognize that the advertisements we carry are not articles, so their response to the advertisements has never depended on their opinion of the editorial integrity of the magazine as a whole.

The magazine editor's argument assumes which one of the following?

- (A) A magazine editor should never be influenced in the performance of his or her professional duties by the wishes of the companies that regularly advertise in the magazine.
- (B) The magazine cannot give any favorable mention in its articles to its regular advertisers without compromising its reputation for editorial integrity.
- (C) Favorable mention of their products in the magazine's articles is of less value to the advertisers than is the continued effectiveness of the magazine as an advertising vehicle.
- (D) Giving favorable mention to a product in a magazine article is a more effective form of advertising than is an explicit advertisement for the product in the same magazine.
- (E) Carrying paid advertisements can never pose any threat to the magazine's reputation for editorial integrity nor to the loyalty of its readership.