

## SECTION I

Time—35 minutes

25 Questions

**Directions:** The questions in this section are based on the reasoning contained in brief statements or passages. For some questions, more than one of the choices could conceivably answer the question. However, you are to choose the best answer; that is, the response that most accurately and completely answers the question. You should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage. After you have chosen the best answer, blacken the corresponding space on your answer sheet.

1. Before the printing press, books could be purchased only in expensive manuscript copies. The printing press produced books that were significantly less expensive than the manuscript editions. The public's demand for printed books in the first years after the invention of the printing press was many times greater than demand had been for manuscript copies. This increase demonstrates that there was a dramatic jump in the number of people who learned how to read in the years after publishers first started producing books on the printing press.

Which one of the following statements, if true, casts doubt on the argument?

- (A) During the first years after the invention of the printing press, letter writing by people who wrote without the assistance of scribes or clerks exhibited a dramatic increase.
- (B) Books produced on the printing press are often found with written comments in the margins in the handwriting of the people who owned the books.
- (C) In the first years after the printing press was invented, printed books were purchased primarily by people who had always bought and read expensive manuscripts but could afford a greater number of printed books for the same money.
- (D) Books that were printed on the printing press in the first years after its invention often circulated among friends in informal reading clubs or libraries.
- (E) The first printed books published after the invention of the printing press would have been useless to illiterate people, since the books had virtually no illustrations.

2. Bevex, an artificial sweetener used only in soft drinks, is carcinogenic for mice, but only when it is consumed in very large quantities. To ingest an amount of Bevex equivalent to the amount fed to the mice in the relevant studies, a person would have, to drink 25 cans of Bevex-sweetened soft drinks per day. For that reason, Bevex is in fact safe for people.

In order for the conclusion that Bevex is safe for people to be properly drawn, which one of the following must be true?

- (A) Cancer from carcinogenic substances develops more slowly in mice than it does in people.
  - (B) If all food additives that are currently used in foods were tested, some would be found to be carcinogenic for mice.
  - (C) People drink fewer than 25 cans of Bevex-sweetened soda per day.
  - (D) People can obtain important health benefits by controlling their weight through the use of artificially sweetened soft drinks.
  - (E) Some of the studies done on Bevex were not relevant to the question of whether or not Bevex is carcinogenic for people.
3. Harry: Airlines have made it possible for anyone to travel around the world in much less time than was formerly possible.

Judith: That is not true. Many flights are too expensive for all but the rich.

Judith's response shows that she interprets Harry's statement to imply that

- (A) the majority of people are rich
- (B) everyone has an equal right to experience world travel
- (C) world travel is only possible via routes serviced by airlines
- (D) most forms of world travel are not affordable for most people
- (E) anyone can afford to travel long distances by air

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4. Nutritionists have recommended that people eat more fiber. Advertisements for a new fiber-supplement pill state only that it contains “44 percent fiber.”

The advertising claim is misleading in its selection of information on which to focus if which one of the following is true?

- (A) There are other products on the market that are advertised as providing fiber as a dietary supplement.
  - (B) Nutritionists base their recommendation on medical findings that dietary fiber protects against some kinds of cancer.
  - (C) It is possible to become addicted to some kinds of advertised pills, such as sleeping pills and painkillers.
  - (D) The label of the advertised product recommends taking 3 pills every day.
  - (E) The recommended daily intake of fiber is 20 to 30 grams, and the pill contains one-third gram.
5. 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

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

The advertisement employs which one of the following argumentative strategies?

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

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## Questions 7–8

Coherent solutions for the problem of reducing health-care costs cannot be found within the current piecemeal system of paying these costs. The reason is that this system gives health-care providers and insurers every incentive to shift, wherever possible, the costs of treating illness onto each other or any other party, including the patient. That clearly is the lesson of the various reforms of the 1980s: push in on one part of this pliable spending balloon and an equally expensive bulge pops up elsewhere. For example, when the government health-care insurance program for the poor cut costs by disallowing payments for some visits to physicians, patients with advanced illness later presented themselves at hospital emergency rooms in increased numbers.

7. The argument proceeds by
- (A) showing that shifting costs onto the patient contradicts the premise of health-care reimbursement
  - (B) attributing without justification fraudulent intent to people
  - (C) employing an analogy to characterize interrelationships
  - (D) denying the possibility of a solution by disparaging each possible alternative system
  - (E) demonstrating that cooperation is feasible by citing an instance
8. The argument provides the most support for which one of the following?
- (A) Under the conditions in which the current system operates, the overall volume of health-care costs could be shrunk, if at all, only by a comprehensive approach.
  - (B) Relative to the resources available for health-care funding, the income of the higher-paid health-care professionals is too high.
  - (C) Health-care costs are expanding to meet additional funds that have been made available for them.
  - (D) Advances in medical technology have raised the expected standards of medical care but have proved expensive.
  - (E) Since unfilled hospital beds contribute to overhead charges on each patient's bill, it would be unwise to hold unused hospital capacity in reserve for large-scale emergencies.
9. The commercial news media emphasize exceptional events such as airplane crashes at the expense of those such as automobile accidents, which occur far more frequently and represent a far greater risk to the public. Yet the public tends to interpret the degree of emphasis the news media give to these occurrences as indicating the degree of risk they represent.
- If the statements above are true, which one of the following conclusions is most strongly supported by them?
- (A) Print media, such as newspapers and magazines, are a better source of information than are broadcast media.
  - (B) The emphasis given in the commercial news media to major catastrophes is dictated by the public's taste for the extraordinary.
  - (C) Events over which people feel they have no control are generally perceived as more dangerous than those which people feel they can avert or avoid.
  - (D) Where commercial news media constitute the dominant source of information, public perception of risk does not reflect actual risk.
  - (E) A massive outbreak of cholera will be covered more extensively by the news media than will the occurrence of a rarer but less serious disease.
10. A large group of hyperactive children whose regular diets included food containing large amounts of additives was observed by researchers trained to assess the presence or absence of behavior problems. The children were then placed on a low-additive diet for several weeks, after which they were observed again. Originally nearly 60 percent of the children exhibited behavior problems; after the change in diet, only 30 percent did so. On the basis of these data, it can be concluded that food additives can contribute to behavior problems in hyperactive children.
- The evidence cited fails to establish the conclusion because
- (A) there is no evidence that the reduction in behavior problems was proportionate to the reduction in food-additive intake
  - (B) there is no way to know what changes would have occurred without the change of diet, since only children who changed to a low-additive diet were studied
  - (C) exactly how many children exhibited behavior problems after the change in diet cannot be determined, since the size of the group studied is not precisely given
  - (D) there is no evidence that the behavior of some of the children was unaffected by additives
  - (E) the evidence is consistent with the claim that some children exhibit more frequent behavior problems after being on the low-additive diet than they had exhibited when first observed

11. In 1990 major engine repairs were performed on 10 percent of the cars that had been built by the National Motor Company in the 1970s and that were still registered. However, the corresponding figure for the cars that the National Motor Company had manufactured in the 1960s was only five percent.

Which one of the following, if true, most helps to explain the discrepancy?

- (A) Government motor vehicle regulations generally require all cars, whether old or new, to be inspected for emission levels prior to registration.
- (B) Owners of new cars tend to drive their cars more carefully than do owners of old cars.
- (C) The older a car is, the more likely it is to be discarded for scrap rather than repaired when major engine work is needed to keep the car in operation.
- (D) The cars that the National Motor Company built in the 1970s incorporated simplified engine designs that made the engines less complicated than those of earlier models.
- (E) Many of the repairs that were performed on the cars that the National Motor Company built in the 1960s could have been avoided if periodic routine maintenance had been performed.

12. No mathematician today would flatly refuse to accept the results of an enormous computation as an adequate demonstration of the truth of a theorem. In 1976, however, this was not the case. Some mathematicians at that time refused to accept the results of a complex computer demonstration of a very simple mapping theorem. Although some mathematicians still hold a strong belief that a simple theorem ought to have a short, simple proof, in fact, some simple theorems have required enormous proofs.

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

- (A) Today, some mathematicians who believe that a simple theorem ought to have a simple proof would consider accepting the results of an enormous computation as a demonstration of the truth of a theorem.
- (B) Some individuals who believe that a simple theorem ought to have a simple proof are not mathematicians.
- (C) Today, some individuals who refuse to accept the results of an enormous computation as a demonstration of the truth of a theorem believe that a simple theorem ought to have a simple proof.
- (D) Some individuals who do not believe that a simple theorem ought to have a simple proof would not be willing to accept the results of an enormous computation as proof of a complex theorem.
- (E) Some nonmathematicians do not believe that a simple theorem ought to have a simple proof.

13. If you climb mountains, you will not live to a ripe old age. But you will be bored unless you climb mountains. Therefore, if you live to a ripe old age, you will have been bored.

Which one of the following most closely parallels the reasoning in the argument above?

- (A) If you do not try to swim, you will not learn how to swim. But you will not be safe in boats if you do not learn how to swim. Therefore, you must try to swim.
- (B) If you do not play golf, you will not enjoy the weekend. But you will be tired next week unless you relax during the weekend. Therefore, to enjoy the weekend, you will have to relax by playing golf.
- (C) If you work for your candidate, you will not improve your guitar playing. But you will neglect your civic duty unless you work for your candidate. Therefore, if you improve your guitar playing, you will have neglected your civic duty.
- (D) If you do not train, you will not be a good athlete. But you will become exhausted easily unless you train. Therefore, if you train, you will not have become exhausted easily.
- (E) If you spend all of your money, you will not become wealthy. But you will become hungry unless you spend all of your money. Therefore, if you become wealthy, you will not become hungry.

14. 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.

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15. 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.

16. Comets do not give off their own light but reflect light from other sources, such as the Sun. Scientists estimate the mass of comets by their brightness: the greater a comet's mass, the more light that comet will reflect. A satellite probe, however, has revealed that the material of which Halley's comet is composed reflects 60 times less light per unit of mass than had been previously thought.

The statements above, if true, give the most support to which one of the following?

- (A) Some comets are composed of material that reflects 60 times more light per unit of mass than the material of which Halley's comet is composed.
- (B) Previous estimates of the mass of Halley's comet which were based on its brightness were too low.
- (C) The total amount of light reflected from Halley's comet is less than scientists had previously thought.
- (D) The reflective properties of the material of which comets are composed vary considerably from comet to comet.
- (E) Scientists need more information before they can make a good estimate of the mass of Halley's comet.

17. Office manager: I will not order recycled paper for this office. Our letters to clients must make a good impression, so we cannot print them on inferior paper.

Stationery supplier: Recycled paper is not necessarily inferior. In fact, from the beginning, the finest paper has been made of recycled material. It was only in the 1850s that paper began to be made from wood fiber, and then only because there were no longer enough rags to meet the demand for paper.

In which one of the following ways does the stationer's response fail to address the office manager's objection to recycled paper?

- (A) It does not recognize that the office manager's prejudice against recycled paper stems from ignorance.
- (B) It uses irrelevant facts to justify a claim about the quality of the disputed product.
- (C) It assumes that the office manager is concerned about environmental issues.
- (D) It presupposes that the office manager understands the basic technology of paper manufacturing.
- (E) It ignores the office manager's legitimate concern about quality.

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Questions 18–19

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

18. The statement that the car Peter took got damaged and the car Alicia took did not plays which one of the following roles in the argument?
- (A) It presents a reason that directly supports the conclusion.
  - (B) It justifies the difference in the actual outcome in the two cases.
  - (C) It demonstrates awareness of a fact on which a possible objection might be based.
  - (D) It illustrates a general principle on which the argument relies.
  - (E) It summarizes a position against which the argument is directed.
19. If all of the claims offered in support of the conclusion are accurate, each of the following could be true EXCEPT:
- (A) The interests of justice would have been better served if the police had released Peter Foster with a warning.
  - (B) Alicia Green had never before driven a car belonging to someone else without first securing the owner's permission.
  - (C) Peter Foster was hit by the taxi while he was running a red light, whereas Alicia Green drove with extra care to avoid drawing the attention of the police to the car she had taken.
  - (D) Alicia Green barely missed hitting a pedestrian when she sped through a red light ten minutes before she was stopped by the police for driving a car that had defective taillights.
  - (E) Peter Foster had been cited for speeding twice in the preceding month, whereas Alicia Green had never been cited for a traffic violation.
20. According to sources who can be expected to know, Dr. Maria Esposito is going to run in the mayoral election. But if Dr. Esposito runs, Jerome Krasman will certainly not run against her. Therefore Dr. Esposito will be the only candidate in the election.
- The flawed reasoning in the argument above most closely parallels that in which one of the following?
- (A) According to its management, Brown's Stores will move next year. Without Brown's being present, no new large store can be attracted to the downtown area. Therefore the downtown area will no longer be viable as a shopping district.
  - (B) The press release says that the rock group Rollercoaster is playing a concert on Saturday. It won't be playing on Friday if it plays on Saturday. So Saturday will be the only day this week on which Rollercoaster will perform.
  - (C) Joshua says the interviewing panel was impressed by Marilyn. But if they were impressed by Marilyn, they probably thought less of Sven. Joshua is probably right, and so Sven will probably not get the job.
  - (D) An informant says that Rustimann was involved in the bank robbery. If Rustimann was involved, Jones was certainly not involved. Since these two are the only people who could have been involved, Rustimann is the only person the police need to arrest.
  - (E) The review said that this book is the best one for beginners at programming. If this book is the best, that other one can't be as good. So this one is the book we should buy.

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21. The initial causes of serious accidents at nuclear power plants have not so far been flaws in the advanced-technology portion of the plants. Rather, the initial causes have been attributed to human error, as when a worker at the Browns Mills reactor in the United States dropped a candle and started a fire, or to flaws in the plumbing, exemplified in a recent incident in Japan. Such everyday events cannot be thought unlikely to occur over the long run.

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

- (A) Now that nuclear power generation has become a part of everyday life, an ever-increasing yearly incidence of serious accidents at the plants can be expected.
  - (B) If nuclear power plants continue in operation, a serious accident at such a plant is not improbable.
  - (C) The likelihood of human error at the operating consoles of nuclear power generators cannot be lessened by thoughtful design of dials, switches, and displays.
  - (D) The design of nuclear power plants attempts to compensate for possible failures of the materials used in their construction.
  - (E) No serious accident will be caused in the future by some flaw in the advanced-technology portion of a nuclear power plant.
22. There is a widespread belief that people can predict impending earthquakes from unusual animal behavior. Skeptics claim that this belief is based on selective coincidence: people whose dogs behaved oddly just before an earthquake will be especially likely to remember that fact. At any given time, the skeptics say, some of the world's dogs will be behaving oddly.

Clarification of which one of the following issues would be most important to an evaluation of the skeptics' position?

- (A) Which is larger, the number of skeptics or the number of people who believe that animal behavior can foreshadow earthquakes?
- (B) Are there means other than the observation of animal behavior that nonscientists can use to predict earthquakes?
- (C) Are there animals about whose behavior people know too little to be able to distinguish unusual from everyday behavior?
- (D) Are the sorts of behavior supposedly predictive of earthquakes as pronounced in dogs as they are in other animals?
- (E) Is the animal behavior supposedly predictive of earthquakes specific to impending earthquakes or can it be any kind of unusual behavior?

23. Defendants who can afford expensive private defense lawyers have a lower conviction rate than those who rely on court-appointed public defenders. This explains why criminals who commit lucrative crimes like embezzlement or insider trading are more successful at avoiding conviction than are street criminals.

The explanation offered above would be more persuasive if which one of the following were true?

- (A) Many street crimes, such as drug dealing, are extremely lucrative and those committing them can afford expensive private lawyers.
- (B) Most prosecutors are not competent to handle cases involving highly technical financial evidence and have more success in prosecuting cases of robbery or simple assault.
- (C) The number of criminals convicted of street crimes is far greater than the number of criminals convicted of embezzlement or insider trading.
- (D) The percentage of defendants who actually committed the crimes of which they are accused is no greater for publicly defended than for privately defended defendants.
- (E) Juries, out of sympathy for the victims of crimes, are much more likely to convict defendants accused of violent crimes than they are to convict defendants accused of "victimless" crimes or crimes against property.

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

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

- (A) Only findings that an investigator purposely seeks can directly bear on that investigator's research.
- (B) In the past few scientific investigators attempted to make clear predictions of the outcome of their research.
- (C) Dependence on large grants is preventing investigators from conducting the type of scientific research that those investigators would personally prefer.
- (D) All scientific investigators who provide grant sponsors with clear projections of the outcome of their research receive at least some of the grants for which they apply.
- (E) In general the most valuable scientific discoveries are the product of serendipity.

25. Police statistics have shown that automobile antitheft devices reduce the risk of car theft, but a statistical study of automobile theft by the automobile insurance industry claims that cars equipped with antitheft devices are, paradoxically, more likely to be stolen than cars that are not so equipped.

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

- (A) Owners of stolen cars almost invariably report the theft immediately to the police but tend to delay notifying their insurance company, in the hope that the vehicle will be recovered.
- (B) Most cars that are stolen are not equipped with antitheft devices, and most cars that are equipped with antitheft devices are not stolen.
- (C) The most common automobile antitheft devices are audible alarms, which typically produce ten false alarms for every actual attempted theft.
- (D) Automobile owners who have particularly theft-prone cars and live in areas of greatest incidence of car theft are those who are most likely to have antitheft devices installed.
- (E) Most automobile thefts are the work of professional thieves against whose efforts antitheft devices offer scant protection.

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.