

SECTION II

Time—35 minutes

24 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. Parent 1: Ten years ago, children in communities like ours did not date until they were thirteen to fifteen years old. Now our nine to eleven year olds are dating. Obviously, children in communities like ours are becoming romantically interested in members of the opposite sex at an earlier age today than they did ten years ago.

Parent 2: I disagree. Our nine to eleven year olds do not want to date, but they feel intense peer pressure to act grown up by dating.

Parent 2, in responding to Parent 1, does which one of the following?

- (A) draws a conclusion about a new phenomenon by comparing it to a phenomenon that is known and understood
- (B) refutes a generalization about nine to eleven-year-old children by means of an exceptional case overlooked by Parent 1
- (C) assumes that nine to eleven-year-old children are as interested in dating as thirteen to fifteen-year-old children
- (D) provides an alternative explanation for the changes in children's dating described by Parent 1
- (E) criticizes Parent 1 as a proponent of a claim rather than criticizing the claim itself

2. All cattle ranchers dislike long winters.

All ski resort owners like long winters because long winters mean increased profits.

Some lawyers are cattle ranchers.

Which one of the following statements, if true and added to those above, most supports the conclusion that no ski resort owners are lawyers?

- (A) Some cattle ranchers are lawyers.
- (B) Some people who dislike long winters are not cattle ranchers.
- (C) All lawyers are cattle ranchers.
- (D) All people who dislike long winters are cattle ranchers.
- (E) All people with increasing profits own ski resorts.

3. 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

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4. Marianna: The problem of drunk driving has been somewhat ameliorated by public education and stricter laws. Additional measures are nevertheless needed. People still drive after drinking, and when they do the probability is greatly increased that they will cause an accident involving death or serious injury.

David: I think you exaggerate the dangers of driving while drunk. Actually, a driver who is in an automobile accident is slightly less likely to be seriously injured if drunk than if sober.

In responding to Marianna's argument, David makes which one of the following errors of reasoning?

- (A) He contradicts himself.
 - (B) He assumes what he is seeking to establish.
 - (C) He contradicts Marianna's conclusion without giving any evidence for his point of view.
 - (D) He argues against a point that is not one that Marianna was making.
 - (E) He directs his criticism against the person making the argument rather than directing it against the argument itself.
5. From a magazine article: Self-confidence is a dangerous virtue: it often degenerates into the vice of arrogance. The danger of arrogance is evident to all who care to look. How much more humane the twentieth century would have been without the arrogant self-confidence of a Hitler or a Stalin!

The author attempts to persuade by doing all of the following EXCEPT

- (A) using extreme cases to evoke an emotional response
- (B) introducing value-laden terms, such as "vice"
- (C) illustrating the danger of arrogance
- (D) appealing to authority to substantiate an assertion
- (E) implying that Hitler's arrogance arose from self-confidence

6. A study was designed to establish what effect, if any, the long-term operation of offshore oil rigs had on animal life on the bottom of the sea. The study compared the sea-bottom communities near rigs with those located in control sites several miles from any rig and found no significant differences. The researchers concluded that oil rigs had no adverse effect on sea-bottom animals.

Which one of the following, if true, most seriously weakens the researchers' conclusion?

- (A) Commercially important fish depend on sea-bottom animals for much of their food, so a drop in catches of those fish would be evidence of damage to sea-bottom communities.
- (B) The discharge of oil from offshore oil rigs typically occurs at the surface of the water, and currents often carry the oil considerable distances before it settles on the ocean floor.
- (C) Contamination of the ocean floor from sewage and industrial effluent does not result in the destruction of all sea-bottom animals but instead reduces species diversity as well as density of animal life.
- (D) Only part of any oil discharged into the ocean reaches the ocean floor: some oil evaporates, and some remains in the water as suspended drops.
- (E) Where the ocean floor consists of soft sediment, contaminating oil persists much longer than where the ocean floor is rocky.

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7. Scientists are sometimes said to assume that something is not the case until there is proof that it is the case. Now suppose the question arises whether a given food additive is safe. At that point, it would be neither known to be safe nor known not to be safe. By the characterization above, scientists would assume the additive not to be safe because it has not been proven safe. But they would also assume it to be safe because it has not been proven otherwise. But no scientist could assume without contradiction that a given substance is both safe and not safe; so this characterization of scientists is clearly wrong.

Which one of the following describes the technique of reasoning used above?

- (A) A general statement is argued to be false by showing that it has deliberately been formulated to mislead.
- (B) A statement is argued to be false by showing that taking it to be true leads to implausible consequences.
- (C) A statement is shown to be false by showing that it directly contradicts a second statement that is taken to be true.
- (D) A general statement is shown to be uninformative by showing that there are as many specific instances in which it is false as there are instances in which it is true.
- (E) A statement is shown to be uninformative by showing that it supports no independently testable inferences.

8. During the 1980s the homicide rate in Britain rose by 50 percent. The weapon used usually was a knife. Potentially lethal knives are sold openly and legally in many shops. Most homicide deaths occur as a result of unpremeditated assaults within the family. Even if these are increasing, they would probably not result in deaths if it were not for the prevalence of such knives. Thus the blame lies with the permissiveness of the government that allows such lethal weapons to be sold. Which one of the following is the strongest criticism of the argument above?

- (A) There are other means besides knives, such as guns or poison, that can be used to accomplish homicide by a person who intends to cause the death of another.
- (B) It is impossible to know how many unpremeditated assaults occur within the family, since many are not reported to the authorities.
- (C) Knives are used in other homicides besides those that result from unpremeditated assaults within the family.
- (D) The argument assumes without justification that the knives used to commit homicide are generally purchased as part of a deliberate plan to commit murder or to inflict grievous harm on a family member.
- (E) If the potentially lethal knives referred to are ordinary household knives, such knives were common before the rise in the homicide rate; but if they are weaponry, such knives are not generally available in households.

9. Nutritionist: Vitamins synthesized by chemists are exactly the same as vitamins that occur naturally in foods. Therefore, it is a waste of money to pay extra for brands of vitamin pills that are advertised as made of higher-quality ingredients or more natural ingredients than other brands are.

The nutritionist's advice is based on which one of the following assumptions?

- (A) It is a waste of money for people to supplement their diets with vitamin pills.
- (B) Brands of vitamin pills made of natural ingredients always cost more money than brands that contain synthesized vitamins.
- (C) All brands of vitamin pills contain some synthesized vitamins.
- (D) Some producers of vitamin pills are guilty of false advertising.
- (E) There is no nonvitamin ingredient in vitamin pills whose quality makes one brand worth more money than another brand.

10. Most people are indignant at the suggestion that they are not reliable authorities about their real wants. Such self-knowledge, however, is not the easiest kind of knowledge to acquire. Indeed, acquiring it often requires hard and even potentially risky work. To avoid such effort, people unconsciously convince themselves that they want what society says they should want.

The main point of the argument is that

- (A) acquiring self-knowledge can be risky
 - (B) knowledge of what one really wants is not as desirable as it is usually thought to be
 - (C) people cannot really want what they should want
 - (D) people usually avoid making difficult decisions
 - (E) people are not necessarily reliable authorities about what they really want
11. Since 1945 pesticide use in the United States has increased tenfold despite an overall stability in number of acres planted. During the same period, crop loss from insects has approximately doubled, from about seven to thirteen percent.

Which one of the following, if true, contributes most to explaining the paradoxical findings above?

- (A) Extension agents employed by state governments to advise farmers have recently advocated using smaller amounts of pesticide, though in past years they promoted heavy pesticide use.
- (B) While pesticide-resistant strains of insects were developing, crop rotation, which for insects disrupts a stable food supply, was gradually abandoned because farmers' eligibility to receive government crop subsidies depended on continuing to plant the same crop.
- (C) Since 1970 the pesticides most lethal to people have generally been replaced by less-lethal chemicals that are equally effective against insects and have a less-damaging effect on the fish in streams fed by water that runs off from treated agricultural fields.
- (D) Because farmers' decisions about how much land to plant are governed by their expectations about crop prices at harvest time, the amount of pesticide they apply also depends in part on expected crop prices.
- (E) Although some pesticides can be removed from foodstuffs through washing, others are taken up into the edible portion of plants, and consumers have begun to boycott foods containing pesticides that cannot be washed off.

12. In discussing the pros and cons of monetary union among several European nations, some politicians have claimed that living standards in the countries concerned would first have to converge if monetary union is not to lead to economic chaos. This claim is plainly false, as is demonstrated by the fact that living standards diverge widely between regions within countries that nevertheless have stable economies.

In attempting to refute the politicians' claim, the author does which one of the following?

- (A) argues that those making the claim are mistaken about a temporal relationship that has been observed
- (B) presents an earlier instance of the action being considered in which the predicted consequences did not occur
- (C) argues that the feared consequence would occur regardless of what course of action was followed
- (D) gives an example of a state of affairs, assumed to be relevantly similar, in which the allegedly incompatible elements coexist
- (E) points out that if an implicit recommendation is followed, the claim can be neither shown to be true nor shown to be false

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13. Because some student demonstrations protesting his scheduled appearance have resulted in violence, the president of the Imperialist Society has been prevented from speaking about politics on campus by the dean of student affairs. Yet to deny anyone the unrestricted freedom to speak is to threaten everyone's right to free expression. Hence, the dean's decision has threatened everyone's right to free expression.

The pattern of reasoning displayed above is most closely paralleled in which one of the following?

- (A) Dr. Pacheco saved a child's life by performing emergency surgery. But surgery rarely involves any risk to the surgeon. Therefore, if an act is not heroic unless it requires the actor to take some risk, Dr. Pacheco's surgery was not heroic.
 - (B) Because anyone who performs an act of heroism acts altruistically rather than selfishly, a society that rewards heroism encourages altruism rather than pure self-interest.
 - (C) In order to rescue a drowning child, Isabel jumped into a freezing river. Such acts of heroism performed to save the life of one enrich the lives of all. Hence, Isabel's action enriched the lives of all.
 - (D) Fire fighters are often expected to perform heroically under harsh conditions. But no one is ever required to act heroically. Hence, fire fighters are often expected to perform actions they are not required to perform.
 - (E) Acts of extreme generosity are usually above and beyond the call of duty. Therefore, most acts of extreme generosity are heroic, since all actions that are above and beyond the call of duty are heroic.
14. Professor: Members of most species are able to communicate with other members of the same species, but it is not true that all communication can be called "language." The human communication system unquestionably qualifies as language. In fact, using language is a trait without which we would not be human.

Student: I understand that communication by itself is not language, but how do you know that the highly evolved communication systems of songbirds, dolphins, honeybees, and apes, for example, are not languages?

The student has interpreted the professor's remarks to mean that

- (A) different species can have similar defining traits
- (B) every human trait except using language is shared by at least one other species
- (C) not all languages are used to communicate
- (D) using language is a trait humans do not share with any other species
- (E) humans cannot communicate with members of other species

Questions 15–16

Environmentalist: An increased number of oil spills and the consequent damage to the environment indicate the need for stricter safety standards for the oil industry. Since the industry refuses to take action, it is the national government that must regulate industry safety standards. In particular, the government has to at least require oil companies to put double hulls on their tankers and to assume financial responsibility for accidents.

Industry representative: The industry alone should be responsible for devising safety standards because of its expertise in handling oil and its understanding of the cost entailed. Implementing the double-hull proposal is not currently feasible because it creates new safety issues. Furthermore, the cost would be burdensome to the industry and consumers.

15. Which one of the following is an assumption on which the argument of the environmentalist depends?
- (A) The only effective sources of increased stringency in safety standards for oil tankers are action by the industry itself or national government regulation.
 - (B) The requirement of two hulls on oil tankers, although initially costly, will save money over time by reducing cleanup costs.
 - (C) The oil industry's aging fleet of tankers must either be repaired or else replaced.
 - (D) Government safety regulations are developed in a process of negotiation with industry leaders and independent experts.
 - (E) Environmental concerns outweigh all financial considerations when developing safety standards.
16. Which one of the following, if true, most strongly supports the industry representative's position against the environmentalist's position?
- (A) Recently a double-hulled tanker loaded with oil was punctured when it ran aground, but no oil was released.
 - (B) Proposed government regulation would mandate the creation of regional response teams within the Coast Guard to respond to oil spills and coordinate cleanup activities.
 - (C) Proposed legislation requires that new tankers have double hulls but that existing tankers either be refitted with double hulls in the next 20 years or else be retired.
 - (D) Fumes can become trapped between the two hull layers of double-hulled tankers, and the risk of explosions that could rupture the tanker's hull is thereby increased.
 - (E) From now on, the oil industry will be required by recent legislation to finance a newly established oil-spill cleanup fund.

17. Biographer: Arnold's belief that every offer of assistance on the part of his colleagues was a disguised attempt to make him look inadequate and that no expression of congratulations on his promotion should be taken at face value may seem irrational. In fact, this belief was a consequence of his early experiences with an admired older sister who always made fun of his ambitions and achievements. In light of this explanation, therefore, Arnold's stubborn belief that his colleagues were duplicitous emerges as clearly justified.

The flawed reasoning in the biographer's argument is most similar to that in which one of the following?

- (A) The fact that top executives generally have much larger vocabularies than do their subordinates explains why Sheldon's belief, instilled in him during his childhood, that developing a large vocabulary is the way to get to the top in the world of business is completely justified.
- (B) Emily suspected that apples are unhealthy ever since she almost choked to death while eating an apple when she was a child. Now, evidence that apples treated with certain pesticides can be health hazards shows that Emily's long held belief is fully justified.
- (C) As a child, Joan was severely punished whenever she played with her father's prize Siamese cat. Therefore, since this information makes her present belief that cats are not good pets completely understandable, that belief is justified.
- (D) Studies show that when usually well-behaved children become irritable, they often exhibit symptoms of viral infections the next day. The suspicion, still held by many adults, that misbehavior must always be paid for is thus both explained and justified.
- (E) Sumayia's father and mother were both concert pianists, and as a child, Sumayia knew several other people trying to make careers as musicians. Thus Sumayia's opinion that her friend Anthony lacks the drive to be a successful pianist is undoubtedly justified.

18. The television documentary went beyond the save-the-wildlife pieties of some of those remote from East Africa and showed that in a country pressed for food, the elephant is a pest, and an intelligent pest at that. There appears to be no way to protect East African farms from the voracious foraging of night-raiding elephant herds. Clearly this example illustrates that _____.

Which one of the following most logically completes the paragraph?

- (A) the preservation of wildlife may endanger human welfare
- (B) it is time to remove elephants from the list of endangered species
- (C) television documentaries are incapable of doing more than reiterating accepted pieties
- (D) farmers and agricultural agents should work closely with wildlife conservationists before taking measures to control elephants
- (E) it is unfair that people in any country should have to endure food shortages

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Questions 19–20

Oxygen-18 is a heavier-than-normal isotope of oxygen. In a rain cloud, water molecules containing oxygen-18 are rarer than water molecules containing normal oxygen. But in rainfall, a higher proportion of all water molecules containing oxygen-18 than of all water molecules containing ordinary oxygen descends to earth. Consequently, scientists were surprised when measurements along the entire route of rain clouds' passage from above the Atlantic Ocean, the site of their original formation, across the Amazon forests, where it rains almost daily, showed that the oxygen-18 content of each of the clouds remained fairly constant.

19. Which one of the following statements, if true, best helps to resolve the conflict between scientists' expectations, based on the known behavior of oxygen-18, and the result of their measurements of the rain clouds' oxygen-18 content?
- (A) Rain clouds above tropical forests are poorer in oxygen-18 than rain clouds above unforested regions.
 - (B) Like the oceans, tropical rain forests can create or replenish rain clouds in the atmosphere above them.
 - (C) The amount of rainfall over the Amazon rain forests is exactly the same as the amount of rain originally collected in the clouds formed above the Atlantic Ocean.
 - (D) The amount of rain recycled back into the atmosphere from the leaves of forest vegetation is exactly the same as the amount of rain in river runoffs that is not recycled into the atmosphere.
 - (E) Oxygen-18 is not a good indicator of the effect of tropical rain forests on the atmosphere above them.
20. Which one of the following inferences about an individual rain cloud is supported by the passage?
- (A) Once it is formed over the Atlantic, the rain cloud contains more ordinary oxygen than oxygen-18.
 - (B) Once it has passed over the Amazon, the rain cloud contains a greater-than-normal percentage of oxygen-18.
 - (C) The cloud's rainfall contains more oxygen-18 than ordinary oxygen.
 - (D) During a rainfall, the cloud must surrender the same percentage of its ordinary oxygen as of its oxygen-18.
 - (E) During a rainfall, the cloud must surrender more of its oxygen-18 than it retains.

21. It is very difficult to prove today that a painting done two or three hundred years ago, especially one without a signature or with a questionably authentic signature, is indubitably the work of this or that particular artist. This fact gives the traditional attribution of a disputed painting special weight, since that attribution carries the presumption of historical continuity. Consequently, an art historian arguing for a deattribution will generally convince other art historians only if he or she can persuasively argue for a specific reattribution.

Which one of the following, if true, most strongly supports the position that the traditional attribution of a disputed painting should not have special weight?

- (A) Art dealers have always been led by economic self-interest to attribute any unsigned paintings of merit to recognized masters rather than to obscure artists.
- (B) When a painting is originally created, there are invariably at least some eyewitnesses who see the artist at work, and thus questions of correct attribution cannot arise at that time.
- (C) There are not always clearly discernible differences between the occasional inferior work produced by a master and the very best work produced by a lesser talent.
- (D) Attribution can shape perception inasmuch as certain features that would count as marks of greatness in a master's work would be counted as signs of inferior artistry if a work were attributed to a minor artist.
- (E) Even though some masters had specialists assist them with certain detail work, such as depicting lace, the resulting works are properly attributed to the masters alone.

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22. Much of the best scientific research of today shows that many of the results of earlier scientific work that was regarded in its time as good are in fact mistaken. Yet despite the fact that scientists are above all concerned to discover the truth, it is valuable for today's scientists to study firsthand accounts of earlier scientific work.

Which one of the following, if true, would best reconcile the two statements above?

- (A) Many firsthand accounts of earlier, flawed scientific work are not generally known to be mistaken.
 - (B) Lessons in scientific methodology can be learned by seeing how earlier scientific work was carried out, sometimes especially when the results of that work are known to be incorrect.
 - (C) Scientists can make valuable contributions to the scientific work of their time even if the results of their work will later be shown to be mistaken.
 - (D) There are many scientists today who are not thoroughly familiar with earlier scientific research.
 - (E) Some of the better scientific research of today does not directly address earlier scientific work.
23. Teachers are effective only when they help their students become independent learners. Yet not until teachers have the power to make decisions in their own classrooms can they enable their students to make their own decisions. Students' capability to make their own decisions is essential to their becoming independent learners. Therefore, if teachers are to be effective, they must have the power to make decisions in their own classrooms.

According to the argument, each of the following could be true of teachers who have enabled their students to make their own decisions EXCEPT:

- (A) Their students have not become independent learners.
- (B) They are not effective teachers.
- (C) They are effective teachers.
- (D) They have the power to make decisions in their own classrooms.
- (E) They do not have the power to make decisions in their own classrooms.

24. Dr. Ruiz: Dr. Smith has expressed outspoken antismoking views in public. Even though Dr. Smith is otherwise qualified, clearly she cannot be included on a panel that examines the danger of secondhand cigarette smoke. As an organizer of the panel, I want to ensure that the panel examines the issue in an unbiased manner before coming to any conclusion.

Which one of the following, if true, provides the strongest basis for countering Dr. Ruiz' argument that Dr. Smith should not be included on the panel?

- (A) A panel composed of qualified people with strong but conflicting views on a particular topic is more likely to reach an unbiased conclusion than a panel composed of people who have kept their views, if any, private.
- (B) People who hold strong views on a particular topic tend to accept new evidence on that topic only if it supports their views.
- (C) A panel that includes one qualified person with publicly known strong views on a particular topic is more likely to have lively discussions than a panel that includes only people with no well-defined views on that topic.
- (D) People who have expressed strong views in public on a particular topic are better at raising funds to support their case than are people who have never expressed strong views in public.
- (E) People who have well-defined strong views on a particular topic prior to joining a panel are often able to impose their views on panel members who are not committed at the outset to any conclusion.

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.