

SECTION II

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. When politicians resort to personal attacks, many editorialists criticize these attacks but most voters pay them scant attention. Everyone knows such attacks will end after election day, and politicians can be excused for mudslinging. Political commentators, however, cannot be. Political commentators should be engaged in sustained and serious debate about ideas and policies. In such a context, personal attacks on opponents serve not to beat those opponents but to cut off the debate.

Which one of the following most accurately states the main point of the argument?

- (A) Personal attacks on opponents serve a useful purpose for politicians.
- (B) Political commentators should not resort to personal attacks on their opponents.
- (C) Editorialists are right to criticize politicians who resort to personal attacks on their opponents.
- (D) The purpose of serious debate about ideas and policies is to counteract the effect of personal attacks by politicians.
- (E) Voters should be concerned about the personal attacks politicians make on each other.

2. Throughout the Popoya Islands community pressure is exerted on people who win the national lottery to share their good fortune with their neighbors. When people living in rural areas win the lottery they invariably throw elaborate neighborhood feasts, often wiping out all of their lottery winnings. However, in the cities, lottery winners frequently use their winnings for their own personal investment rather than sharing their good fortune with their neighbors.

Which one of the following, if true, contributes most to an explanation of the difference between the behavior of lottery winners in rural areas and those in cities?

- (A) Twice as many Popoyans live in rural areas as live in the city.
- (B) Popoyan city dwellers tend to buy several lottery tickets at a time, but they buy tickets less frequently than do rural dwellers.
- (C) Lottery winners in rural areas are notified of winning by public posting of lists of winners, but notification in the city is by private mail.
- (D) Families in rural areas in the Popoyas many contain twelve or fourteen people, but city families average six or seven.
- (E) Twice as many lottery tickets are sold in rural areas as are sold in the city.

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3. 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.
4. The highest-ranking detectives in the city's police department are also the most adept at solving crimes. Yet in each of the past ten years, the average success rate for the city's highest-ranking detectives in solving criminal cases has been no higher than the average success rate for its lowest-ranking detectives.

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

- (A) The detectives who have the highest success rate in solving criminal cases are those who have worked as detectives the longest.
- (B) It generally takes at least ten years for a detective to rise from the lowest to the highest ranks of the city's detective force.
- (C) Those detectives in the police department who are the most adept at solving criminal cases are also those most likely to remain in the police department.
- (D) The police department generally give the criminal cases that it expects to be the easiest to solve to its lowest-ranking detectives.
- (E) None of the lowest-ranking detectives in the police department had experience in solving criminal cases prior to joining the police department.

5. Irrigation runoff from neighboring farms may well have increased the concentration of phosphorus in the local swamp above previous levels, but the claim that the increase in phosphorus is harming the swamp's native aquatic wildlife is false; the phosphorus concentration in the swamp is actually less than that found in certain kinds of bottled water that some people drink every day.

The argument is vulnerable to criticism on the ground that it

- (A) makes exaggerations in formulating the claim against which it argues
 - (B) bases its conclusion on two contradictory claims
 - (C) relies on evidence the relevance of which has not been established
 - (D) concedes the very point that it argues against
 - (E) makes a generalization that is unwarranted because the sources of the data on which it is based have not been specified
6. Copyright laws protect the rights of writers to profits earned from their writings, whereas patent laws protect inventors' rights to profits earned from their inventions. In Jawade, when computer-software writers demanded that their rights to profit be protected, the courts determined that information written for a machine does not fit into either the copyright or the patent category. Clearly, therefore, the profit rights of computer-software writers remain unprotected in Jawade.
- Which one of the following is an assumption on which the argument depends?
- (A) Computer-software writers are not an influential enough group in Jawade for the government to consider modifying existing copyright laws in order to protect this group's profit rights.
 - (B) No laws exist, other than copyright laws and patent laws, that would protect the profit rights of computer-software writers in Jawade.
 - (C) Most of the computer software used in Jawade is imported from other countries.
 - (D) Computer software is more similar to writings covered by copyright laws than it is to inventions covered by patent laws.
 - (E) Copyright laws and patent laws in Jawade have not been modified since their original adoption.

7. Brownlea's post office must be replaced with a larger one. The present one cannot be expanded. Land near the present location in the center of town is more expensive than land on the outskirts of town. Since the cost of acquiring a site is a significant part of the total construction cost, the post office clearly could be built more cheaply on the outskirts of town.

Which one of the following, if true, most seriously undermines the argument's stated conclusion?

- (A) The new post office will have to be built in accordance with a demanding new citywide building code.
 - (B) If the new post office is built on the outskirts of town, it will require a parking lot, but if sited near the present post office it will not.
 - (C) If the new post office is built on the outskirts of town, current city bus routes will have to be expanded to provide access.
 - (D) If the new post office is built on the outskirts of town, residents will make decreased use of post office boxes, with the result that mail carriers will have to deliver more mail to homes.
 - (E) If the new post office is built near the center of town, disruptions to city traffic would have to be minimized by taking such steps as doing some construction work in stages at night and on weekends.
8. In the past, the railroads in Ostronia were run as regional monopolies and operated with little regard for what customers wanted. In recent years, with improvements to the Ostronian national highway network, the railroad companies have faced heavy competition from long-distance trucking companies. But because of government subsidies that have permitted Ostronian railroad companies to operate even while incurring substantial losses, the companies continue to disregard customers' needs and desires.

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

- (A) If the government of Ostronia ceases to subsidize railroad companies, few of those companies will continue to operate.
- (B) Few companies in Ostronia that have received subsidies from the government have taken the needs and desires of their customers into account.
- (C) Without government subsidies, railroad companies in Ostronia would have to increase the prices they charge their customers.
- (D) The transportation system in Ostronia is no more efficient today than it was in the past.
- (E) In recent years, some companies in Ostronia that have had little regard for the desires of their customers have nonetheless survived.

9. Although Damon had ample time earlier in the month to complete the paper he is scheduled to present at a professional conference tomorrow morning, he repeatedly put off doing it. Damon could still get the paper ready in time, but only if he works on it all evening without interruption. However, his seven-year-old daughter's tap-dance recital takes place this evening, and Damon had promised both to attend and to take his daughter and her friends out for ice cream afterward. Thus, because of his procrastination, Damon will be forced to choose between his professional and his family responsibilities.

The argument proceeds by

- (A) providing evidence that one event will occur in order to establish that an alternative event cannot occur
 - (B) showing that two situations are similar in order to justify the claim that someone with certain responsibilities in the first situation has similar responsibilities in the second situation
 - (C) invoking sympathy for someone who finds himself in a dilemma in order to excuse that person's failure to meet all of his responsibilities
 - (D) making clear the extent to which someone's actions resulted in harm to others in order to support the claim that those actions were irresponsible
 - (E) demonstrating that two situations cannot both occur by showing that something necessary for one of those situations is incompatible with something necessary for the other situation
10. The increase in the price of jet fuel is due to a sharp decrease over the past year in the supply of jet fuel available relative to demand. Nonetheless, the amount of jet fuel available for sale is larger today than it was last year.

If the statements above are true, which one of the following conclusions can be properly drawn on the basis of them?

- (A) The demand for jet fuel has increased over the past year.
- (B) The fuel efficiency of jet engines has increased over the past year.
- (C) The number of jet airline flights has decreased over the past year.
- (D) The cost of refining petroleum for jet fuel has increased over the past year.
- (E) The supply of petroleum available for jet fuel has decreased over the past year.

Questions 11–12

Alan: Government subsidies have been proposed in Cariana to encourage farmers in Rochelle, the country's principal agricultural region, to implement certain new farming techniques. Unless these techniques are implemented, erosion of productive topsoil cannot be controlled. Unfortunately, farmers cannot afford to shoulder the entire cost of the new techniques, which are more expensive than those currently used. Therefore, without subsidies, agricultural output in Rochelle will inevitably decline.

Betty: But erosion in Rochelle is caused by recurring floods, which will end next year once Cariana completes the hydroelectric dam it is building across the region's major river. Therefore, Rochelle's total agricultural output will stabilize at its present level even without subsidies.

11. Which one of the following is an assumption on which Betty's argument depends?
- (A) Building a dam across Rochelle's major river will not reduce any recurrent flooding that occurs in regions of Cariana other than Rochelle.
 - (B) The new farming techniques that must be implemented to control soil erosion in Rochelle are not well suited to other regions of Cariana.
 - (C) The current yearly output, if any, from Rochelle's land that will be permanently under water once the dam is completed will at least be matched by additional yearly output from Rochelle's remaining land.
 - (D) The cost to the government of Cariana to operate the hydroelectric dam will not be greater than the projected cost of subsidizing the farmers of Rochelle in the implementation of the new farming techniques.
 - (E) The government of Cariana has sufficient financial resources both to subsidize its farmers' implementation of new farming techniques and to operate a hydroelectric dam.
12. Betty uses which one of the following argumentative techniques in countering Alan's argument?
- (A) showing that one premise in Alan's argument is inconsistent with another premise in his argument
 - (B) making additional claims that, if correct, undermine a premise in Alan's argument
 - (C) demonstrating that Alan's conclusion is true but not for the reasons Alan gives to support it
 - (D) presenting evidence indicating that the policy Alan argues in favor of would have damaging consequences that outweigh its positive consequences
 - (E) pointing out that Alan's argument mistakenly identifies something as the cause of a trend when it is really an effect of that trend

13. Astronomers have long thought that the irregularity in the orbit of the planet Neptune was adequately explained by the gravitational pull exerted on Neptune by the planet Pluto. The most recent observations of Pluto, however, indicate that this planet is much too small to exert the amount of gravitational pull on Neptune that astronomers once thought it did.

If the statements above are true, they provide the most support for which one of the following?

- (A) Neptune is somewhat larger than scientists once believed it to be.
- (B) The orbit on Neptune is considerably more irregular than scientists once thought it was.
- (C) There exists another, as yet undiscovered planet with an orbit beyond that of Pluto.
- (D) The gravitational pull of Pluto is not the sole cause of Neptune's irregular orbit.
- (E) Further observations of Pluto will eventually show it to be even smaller than it is now thought to be.

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Questions 14–15

In most corporations the salaries of executives are set by a group from the corporation's board of directors. Since the board's primary mission is to safeguard the economic health of the corporation rather than to make its executives rich, this way of setting executives' salaries is expected to prevent excessively large salaries. But, clearly, this expectation is based on poor reasoning. After all, most members of a corporation's board are themselves executives of some corporation and can expect to benefit from setting generous benchmarks for executives' salaries.

14. The point made by the author is that the most common way of setting executives' salaries might not keep those salaries in bounds because
- (A) most corporate executives, thanks to their generous salaries, are not financially dependent on money earned as board members
 - (B) most corporate executive might be less generous in setting their own salaries than the board members actually setting them are
 - (C) many board members might let their self-interest as executives interfere with properly discharging their role, as board members, in setting executives' salaries
 - (D) many board members who set executives' salaries unreasonably high do so because they happen to be on the board of a corporation of which they expect later to become executives
 - (E) many board members are remunerated generously and wish to protect this source of income by pleasing the executives to whom they owe their appointments on the board
15. Which one of the following practices is vulnerable to a line of criticism most parallel to that used in the argument in the passage?
- (A) in medical malpractice suits, giving physicians not directly involved in a suit a major role in determining the damages due to successful plaintiffs
 - (B) in a legislature, allowing the legislators to increase their own salaries only if at least two-thirds of them vote in favor of an increase
 - (C) on a factory floor, giving workers an incentive to work both fast and accurately by paying them by the piece but counting only pieces of acceptable quality
 - (D) in a sports competition decided by judges' scores, selecting the judges from among people retired from that sport after successful careers
 - (E) in a business organization, distributing a group bonus among the members of a task force on the basis of a confidential evaluation, by each member, of the contribution made by each of the others

16. Consumer advocate: One advertisement that is deceptive, and thus morally wrong, states that "gram for gram, the refined sugar used in our chocolate pies is no more fattening than the sugars found in fruits and vegetables." This is like trying to persuade someone that chocolate pies are not fattening by saying that, calorie for calorie, they are no more fattening than celery. True, but it would take a whole shopping cart full of celery to equal a chocolate pie's worth of calories.

Advertiser: This advertisement cannot be called deceptive. It is, after all, true.

Which one of the following principles, if established, would do most to support the consumer advocate's position against the advertiser's response?

- (A) It is morally wrong to seek to persuade by use of deceptive statements.
- (B) A true statement should be regarded as deceptive only if the person making the statement believes it to be false, and thus intends the people reading or hearing it to acquire a false belief.
- (C) To make statements that impart only a small proportion of the information in one's possession should not necessarily be regarded as deceptive.
- (D) It is morally wrong to make a true statement in a manner that will deceive hearers or readers of the statement into believing that it is false.
- (E) A true statement should be regarded as deceptive if it is made with the expectation that people hearing or reading the statement will draw a false conclusion from it.

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17. Members of the Amazonian Akabe people commonly take an early-morning drink of a tea made from the leaves of a forest plant. Although they greatly enjoy this drink, at dawn they drink it only in small amounts. Anthropologists hypothesize that since this tea is extraordinarily high in caffeine, the explanation for the Akabe's not drinking more of it at dawn is that high caffeine intake would destroy the surefootedness that their daily tasks require.

Which one of the following, if true, most seriously calls the anthropologists' explanation into question?

- (A) The drink is full of nutrients otherwise absent from the Akabe diet.
 - (B) The Akabe also drink the tea in the evening, after their day's work is done.
 - (C) The leaves used for the tea contain a soluble narcotic.
 - (D) Akabe children are introduced to the tea in only a weak form.
 - (E) When celebrating, the Akabe drink the tea in large quantities.
18. All of the cargo ships of the Blue Star Line are over 100 meters long, and all of its passenger ships are under 100 meters long. Most of the ships of the Blue Star Line were built before 1980. All of the passenger and cargo ships of the Gold Star line were built after 1980, and all are under 100 meters long. The dockside facilities of Port Tropica, which is open only to ships of these two lines, can accommodate only those ships that are less than 100 meters long. The S.S. Coral is a cargo ship that is currently docked at Port Tropica.

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

- (A) The S.S. Coral was built after 1980.
- (B) The S.S. Coral belongs to the Blue Star Line.
- (C) Port Tropica is served only by cargo ships.
- (D) Port Tropica is not served by ships of the Blue Star Line.
- (E) All of the ships of the Blue Star Line are older than any of the ships of the Gold Star Line.

19. Spectroscopic analysis has revealed the existence of frozen nitrogen, methane, and carbon monoxide on the surface of Pluto. Such ices have a tendency to vaporize, producing an atmosphere. Since the proportion of any gas in such an atmosphere depends directly on how readily the corresponding ice vaporizes, astronomers have concluded that the components of Pluto's atmosphere are nitrogen, carbon monoxide, and methane, in order of decreasing abundance.

The astronomers' argument relies on which one of the following assumptions?

- (A) There is no more frozen nitrogen on the surface of Pluto than there is either frozen carbon monoxide or methane.
- (B) Until space probes reach Pluto, direct analysis of the atmosphere is impossible.
- (C) There is no frozen substance on the surface of Pluto that vaporizes more readily than methane but less readily than carbon monoxide.
- (D) Nitrogen is found in the atmosphere of a planet only if nitrogen ice is found on the surface of that planet.
- (E) A mixture of nitrogen, carbon monoxide, and methane is characteristic of the substances from which the Solar System formed.

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20. Ann will either take a leave of absence from Technocomp and return in a year or else she will quit her job there; but she would not do either one unless she were offered a one-year teaching fellowship at a prestigious university. Technocomp will allow her to take a leave of absence if it does not find out that she has been offered the fellowship, but not otherwise. Therefore, Ann will quit her job at Technocomp only if Technocomp finds out she has been offered the fellowship.

Which one of the following, if assumed, allows the conclusion above to be properly drawn?

- (A) Technocomp will find out about Ann being offered the fellowship only if someone informs on her.
- (B) The reason Ann wants the fellowship is so she can quit her job at Technocomp.
- (C) Technocomp does not allow any of its employees to take a leave of absence in order to work for one of its competitors.
- (D) Ann will take a leave of absence if Technocomp allows her to take a leave of absence.
- (E) Ann would be offered the fellowship only if she quit her job at Technocomp.

21. If a mechanical aerator is installed in a fish pool, the water in the pool can be properly aerated. So, since John's fish pool does not have a mechanical aerator, it must be that his pool is not properly aerated. Without properly aerated water, fish cannot thrive. Therefore, any fish in John's fish pool will not thrive.

Which one of the following arguments contains an error of reasoning that is also contained in the argument above?

- (A) If alum is added to pickle brine, brine can replace the water in the pickles. Therefore, since Paula does not add alum to her pickle brine, the water in the pickles cannot be replaced by brine. Unless their water is replaced with brine, pickles will not stay crisp. Thus, Paula's pickles will not stay crisp.
- (B) If pectin is added to jam, the jam will gel. Without a setting agent such as pectin, jam will not gel. So in order to make his jam gel, Harry should add a setting agent such as pectin to the jam.
- (C) If stored potatoes are not exposed to ethylene, the potatoes will not sprout. Beets do not release ethylene. Therefore, if Sara stores her potatoes together with beets, the potatoes will not sprout.
- (D) If a carrot patch is covered with mulch in the fall, the carrots can be left in the ground until spring. Without a mulch cover, carrots stored in the ground can suffer frost damage. Thus, since Kevin covers his carrot patch with mulch in the fall, the carrots can safely be left in the ground.
- (E) If tomatoes are not stored in a dark place, their seeds sometimes sprout. Sprouted seeds can make tomatoes inedible. Therefore, since Maria does not store her tomatoes in a dark place, some of Maria's tomatoes could be inedible.

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Questions 22–23

Antinuclear activist: The closing of the nuclear power plant is a victory for the antinuclear cause. It also represents a belated acknowledgment by the power industry that they cannot operate such plants safely.

Nuclear power plant manager: It represents no such thing. The availability of cheap power from nonnuclear sources, together with the cost of mandated safety inspections and safety repairs, made continued operation uneconomic. Thus it was not safety considerations but economic considerations that dictated the plant's closing.

22. The reasoning in the manager's argument is flawed because the argument
- (A) fails to acknowledge that the power industry might now believe nuclear power plants to be unsafe even though this plant was not closed for safety reasons
 - (B) overlooks the possibility that the sources from which cheap power is available might themselves be subject to safety concerns
 - (C) mistakes the issue of what the closure of the plant represents to the public for the issue of what the managers' reasons for the closure were
 - (D) takes as one of its premises a view about the power industry's attitude toward nuclear safety that contradicts the activist's view
 - (E) counts as purely economic considerations some expenses that arise as a result of the need to take safety precautions
23. Which one of the following, if true, most strongly supports the activist's claim of victory?
- (A) The plant had reached the age at which its operating license expired.
 - (B) The mandate for inspections and repairs mentioned by the manager was recently enacted as a result of pressure from antinuclear groups.
 - (C) The plant would not have closed if cheap power from nonnuclear sources had not been available.
 - (D) Per unit of electricity produced, the plant had the highest operating costs of any nuclear power plant.
 - (E) The plant that closed had been able to provide backup power to an electrical network when parts of the network became overloaded.

Questions 24–25

Statistician: Changes in the Sun's luminosity correlate exceedingly well with average land temperatures on Earth. Clearly—and contrary to accepted opinion among meteorologists—the Sun's luminosity essentially controls land temperatures on Earth.

Meteorologist: I disagree. Any professional meteorologist will tell you that in a system as complicated as that giving rise to the climate, no significant aspect can be controlled by a single variable.

24. The rejection by the meteorologist of the statistician's conclusion employs which one of the following techniques of argumentation?
- (A) supporting a conclusion about a specific case by invoking a relevant generalization
 - (B) producing a single counterexample that establishes that a generalization is false as stated
 - (C) reanalyzing a correlation as reflecting the multiple effects of a single cause
 - (D) rejecting a conclusion because it is a proposition that cannot be experimentally tested
 - (E) pointing out that potentially unfavorable evidence has been systematically neglected
25. The reasoning in the meteorologist's counterargument is questionable because that argument
- (A) rejects a partial explanation, not because it is incorrect, but only because it is not complete
 - (B) fails to distinguish phenomena that exist independently of a particular system from phenomena that exist only as part of the system
 - (C) calls into question the existence of a correlation when the only real issue is that of how to interpret the correlation
 - (D) dismisses a hypothesis on the grounds that it fails to deal with any matters of the scientific significance
 - (E) appeals to the authoritativeness of an opinion without evaluating the merit of a putative counterexample

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.