



SECTION III

Time—35 minutes

26 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. The painted spider spins webs that are much stickier than the webs spun by the other species of spiders that share the same habitat. Stickier webs are more efficient at trapping insects that fly into them. Spiders prey on insects by trapping them in their webs; therefore, it can be concluded that the painted spider is a more successful predator than its competitors.

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

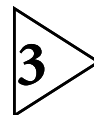
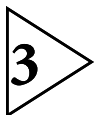
- (A) Not all of the species of insects living in the painted spider's habitat are flying insects.
- (B) Butterflies and moths, which can shed scales, are especially unlikely to be trapped by spider webs that are not very sticky.
- (C) Although the painted spider's venom does not kill insects quickly, it paralyzes them almost instantaneously.
- (D) Stickier webs reflect more light, and so are more visible to insects, than are less-sticky webs.
- (E) The webs spun by the painted spider are no larger than the webs spun by the other species of spiders in the same habitat.

2. Despite the best efforts of astronomers, no one has yet succeeded in exchanging messages with intelligent life on other planets or in other solar systems. In fact, no one has even managed to prove that any kind of extraterrestrial life exists. Thus, there is clearly no intelligent life anywhere but on Earth.

The argument's reasoning is flawed because the argument

- (A) fails to consider that there might be extraterrestrial forms of intelligence that are not living beings
- (B) confuses an absence of evidence for a hypothesis with the existence of evidence against the hypothesis
- (C) interprets a disagreement over a scientific theory as a disproof of that theory
- (D) makes an inference that relies on the vagueness of the term "life"
- (E) relies on a weak analogy rather than on evidence to draw a conclusion

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Questions 3–4

Bart: A mathematical problem that defied solution for hundreds of years has finally yielded to a supercomputer. The process by which the supercomputer derived the result is so complex, however, that no one can fully comprehend it. Consequently, the result is unacceptable.

Anne: In scientific research, if the results of a test can be replicated in other tests, the results are acceptable even though the way they were derived might not be fully understood. Therefore, if a mathematical result derived by a supercomputer can be reproduced by other supercomputers following the same procedure, it is acceptable.

3. Bart's argument requires which one of the following assumptions?
 - (A) The mathematical result in question is unacceptable because it was derived with the use of a supercomputer.
 - (B) For the mathematical result in question to be acceptable, there must be someone who can fully comprehend the process by which it was derived.
 - (C) To be acceptable, the mathematical result in question must be reproduced on another supercomputer.
 - (D) Making the mathematical result in question less complex would guarantee its acceptability.
 - (E) The supercomputer cannot derive an acceptable solution to the mathematical problem in question.
4. The exchange between Bart and Anne most strongly supports the view that they disagree as to
 - (A) whether a scientific result that has not been replicated can properly be accepted
 - (B) whether the result that a supercomputer derives for a mathematical problem must be replicated on another supercomputer before it can be accepted
 - (C) the criterion to be used for accepting a mathematical result derived by a supercomputer
 - (D) the level of complexity of the process to which Bart refers in his statements
 - (E) the relative complexity of mathematical problems as compared to scientific problems

5. It is commonly held among marketing experts that in a nonexpanding market a company's best strategy is to go after a bigger share of the market and that the best way to do this is to run comparative advertisements that emphasize weaknesses in the products of rivals. In the stagnant market for food oil, soybean-oil and palm-oil producers did wage a two-year battle with comparative advertisements about the deleterious effect on health of each other's products. These campaigns, however, had little effect on respective market shares; rather, they stopped many people from buying any edible oils at all.

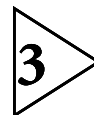
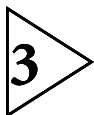
The statements above most strongly support the conclusion that comparative advertisements

- (A) increase a company's market share in all cases in which that company's products are clearly superior to the products of rivals
 - (B) should not be used in a market that is expanding or likely to expand
 - (C) should under no circumstances be used as a retaliatory measure
 - (D) carry the risk of causing a contraction of the market at which they are aimed
 - (E) yield no long-term gains unless consumers can easily verify the claims made
6. Recent unexpectedly heavy rainfalls in the metropolitan area have filled the reservoirs and streams; water rationing, therefore, will not be necessary this summer.

Which one of the following, if true, most undermines the author's prediction?

 - (A) Water rationing was imposed in the city in three of the last five years.
 - (B) A small part of the city's water supply is obtained from deep underground water systems that are not reached by rainwater.
 - (C) The water company's capacity to pump water to customers has not kept up with the increased demand created by population growth in the metropolitan area.
 - (D) The long-range weather forecast predicts lower-than-average temperatures for this summer.
 - (E) In most years the city receives less total precipitation in the summer than it receives in any other season.

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7. John: In 80 percent of car accidents, the driver at fault was within five miles of home, so people evidently drive less safely near home than they do on long trips.

Judy: But people do 80 percent of their driving within five miles of home.

How is Judy's response related to John's argument?

- (A) It shows that the evidence that John presents, by itself, is not enough to prove his claim.
 - (B) It restates the evidence that John presents in different terms.
 - (C) It gives additional evidence that is needed by John to support his conclusion.
 - (D) It calls into question John's assumption that whenever people drive more than five miles from home they are going on a long trip.
 - (E) It suggests that John's conclusion is merely a restatement of his argument's premise.
8. Reasonable people adapt themselves to the world; unreasonable people persist in trying to adapt the world to themselves. Therefore, all progress depends on unreasonable people.

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

- (A) Reasonable people and unreasonable people are incompatible.
 - (B) If there are only reasonable people, there cannot be progress.
 - (C) If there are unreasonable people, there will be progress.
 - (D) Some unreasonable people are unable to bring about progress.
 - (E) Unreasonable people are more persistent than reasonable people.
9. Theater critic: The theater is in a dismal state. Audiences are sparse and revenue is down. Without the audience and the revenue, the talented and creative people who are the lifeblood of the theater are abandoning it. No wonder standards are deteriorating.

Producer: It's not true that the theater is in decline. Don't you realize that your comments constitute a self-fulfilling prophecy? By publishing these opinions, you yourself are discouraging new audiences from emerging and new talent from joining the theater.

Which one of the following is a questionable technique employed by the producer in responding to the critic?

- (A) focusing on the effects of the critic's evaluation rather than on its content
- (B) accusing the critic of relying solely on opinion unsupported by factual evidence
- (C) challenging the motives behind the critic's remarks rather than the remarks themselves
- (D) relying on emphasis rather than on argument
- (E) invoking authority in order to intimidate the critic

10. Michelangelo's sixteenth-century Sistine Chapel paintings are currently being restored. A goal of the restorers is to uncover Michelangelo's original work, and so additions made to Michelangelo's paintings by later artists are being removed. However, the restorers have decided to make one exception: to leave intact additions that were painted by da Volterra.

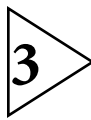
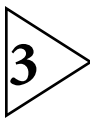
Which one of the following, if true, most helps to reconcile the restorers' decision with the goal stated in the passage?

- (A) The restorers believe that da Volterra stripped away all previous layers of paint before he painted his own additions to the Sistine Chapel.
- (B) Because da Volterra used a type of pigment that is especially sensitive to light, the additions to the Sistine Chapel that da Volterra painted have relatively muted colors.
- (C) Da Volterra's additions were painted in a style that was similar to the style used by Michelangelo.
- (D) Michelangelo is famous primarily for his sculptures and only secondarily for his paintings, whereas da Volterra is known exclusively for his paintings.
- (E) Da Volterra's work is considered by certain art historians to be just as valuable as the work of some of the other artists who painted additions to Michelangelo's work.

11. A controversial program rewards prison inmates who behave particularly well in prison by giving them the chance to receive free cosmetic plastic surgery performed by medical students. The program is obviously morally questionable, both in its assumptions about what inmates might want and in its use of the prison population to train future surgeons. Putting these moral issues aside, however, the surgery clearly has a powerful rehabilitative effect, as is shown by the fact that, among recipients of the surgery, the proportion who are convicted of new crimes committed after release is only half that for the prison population as a whole.

A flaw in the reasoning of the passage is that it

- (A) allows moral issues to be a consideration in presenting evidence about matters of fact
- (B) dismisses moral considerations on the grounds that only matters of fact are relevant
- (C) labels the program as "controversial" instead of discussing the issues that give rise to controversy
- (D) asserts that the rehabilitation of criminals is not a moral issue
- (E) relies on evidence drawn from a sample that there is reason to believe is unrepresentative



12. 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

13. There are just two ways a moon could have been formed from the planet around which it travels: either part of the planet's outer shell spun off into orbit around the planet or else a large object such as a comet or meteoroid, struck the planet so violently that it dislodged a mass of material from inside the planet. Earth's moon consists primarily of materials different from those of the Earth's outer shell.

If the statements above are true, which one of the following, if also true, would most help to justify drawing the conclusion that Earth's moon was not formed from a piece of the Earth?

- (A) The moons of some planets in Earth's solar system were not formed primarily from the planets' outer shells.
- (B) Earth's moon consists primarily of elements that differ from those inside the Earth.
- (C) Earth's gravity cannot have trapped a meteoroid and pulled it into its orbit as the Moon.
- (D) The craters on the surface of Earth's moon show that it has been struck by many thousands of large meteoroids.
- (E) Comets and large meteoroids normally move at very high speeds.

14. Caffeine can kill or inhibit the growth of the larvae of several species of insects. One recent experiment showed that tobacco hornworm larvae die when they ingest a preparation that consists, in part, of finely powdered tea leaves, which contain caffeine. This result is evidence for the hypothesis that the presence of non-negligible quantities of caffeine in various parts of many diverse species of plants is not accidental but evolved as a defense for those plants.

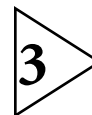
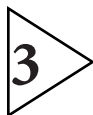
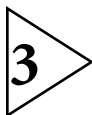
The argument assumes that

- (A) caffeine-producing plants are an important raw material in the manufacture of commercial insecticides
- (B) caffeine is stored in leaves and other parts of caffeine-producing plants in concentrations roughly equal to the caffeine concentration of the preparation fed to the tobacco hornworm larvae
- (C) caffeine-producing plants grow wherever insect larvae pose a major threat to indigenous plants or once posed a major threat to the ancestors of those plants
- (D) the tobacco plant is among the plant species that produce caffeine for their own defense
- (E) caffeine-producing plants or their ancestors have at some time been subject to being fed upon by creatures sensitive to caffeine

15. The only plants in the garden were tulips, but they were tall tulips. So the only plants in the garden were tall plants.

Which one of the following exhibits faulty reasoning most similar to the faulty reasoning in the argument above?

- (A) The only dogs in the show were poodles, and they were all black poodles. So all the dogs in the show were black.
- (B) All the buildings on the block were tall. The only buildings on the block were office buildings and residential towers. So all the office buildings on the block were tall buildings.
- (C) All the primates in the zoo were gorillas. The only gorillas in the zoo were small gorillas. Thus the only primates in the zoo were small primates.
- (D) The only fruit in the kitchen was pears, but the pears were not ripe. Thus none of the fruit in the kitchen was ripe.
- (E) All the grand pianos here are large. Ail the grand pianos here are heavy. Thus everything large is heavy.



16. Scientific research will be properly channeled whenever those who decide which research to fund give due weight to the scientific merits of all proposed research. But when government agencies control these funding decisions, political considerations play a major role in determining which research will be funded, and whenever political considerations play such a role, the inevitable result is that scientific research is not properly channeled.

Which one of the following can be properly inferred from the statements above?

- (A) There is no proper role for political considerations to play in determining who will decide which scientific research to fund.
 - (B) It is inevitable that considerations of scientific merit will be neglected in decisions regarding the funding of scientific research.
 - (C) Giving political considerations a major role in determining which scientific research to fund is incompatible with giving proper weight to the scientific merits of proposed research.
 - (D) When scientific research is not properly channeled, governments tend to step in and take control of the process of choosing which research to fund.
 - (E) If a government does not control investment in basic scientific research, political consideration will inevitably be neglected in deciding which research to fund.
17. A new silencing device for domestic appliances operates by producing sound waves that cancel out the sound waves produced by the appliance. The device, unlike conventional silencers, actively eliminates the noise the appliance makes, and for that reason vacuum cleaners designed to incorporate the new device will operate with much lower electricity consumption than conventional vacuum cleaners.

Which one of the following, if true, most helps to explain why the new silencing device will make lower electricity consumption possible?

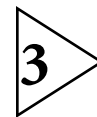
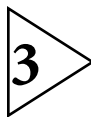
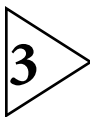
- (A) Designers of vacuum cleaner motors typically have to compromise the motors' efficiency in order to reduce noise production.
- (B) The device runs on electricity drawn from the appliance's main power supply.
- (C) Conventional vacuum cleaners often use spinning brushes to loosen dirt in addition to using suction to remove dirt.
- (D) Governmental standards for such domestic appliances as vacuum cleaners allow higher electricity consumption when vacuum cleaners are quieter.
- (E) The need to incorporate silencers in conventional vacuum cleaners makes them heavier and less mobile than they might otherwise be.

18. Because dinosaurs were reptiles, scientists once assumed that, like all reptiles alive today, dinosaurs were cold-blooded. The recent discovery of dinosaur fossils in the northern arctic, however, has led a number of researchers to conclude that at least some dinosaurs might have been warm-blooded. These researchers point out that only warm-blooded animals could have withstood the frigid temperatures that are characteristic of arctic winters, whereas cold-blooded animals would have frozen to death in the extreme cold.

Which one of the following, if true, weakens the researchers' argument?

- (A) Today's reptiles are generally confined to regions of temperate or even tropical climates.
- (B) The fossils show the arctic dinosaurs to have been substantially smaller than other known species of dinosaurs.
- (C) The arctic dinosaur fossils were found alongside fossils of plants known for their ability to withstand extremely cold temperatures.
- (D) The number of fossils found together indicates herds of dinosaurs so large that they would need to migrate to find a continual food supply.
- (E) Experts on prehistoric climatic conditions believe that winter temperatures in the prehistoric northern arctic were not significantly different from what they are today.

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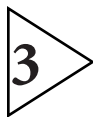
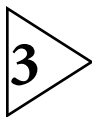
Questions 19–20

Maria: Calling any state totalitarian is misleading: it implies total state control of all aspects of life. The real world contains no political entity exercising literally total control over even one such aspect. This is because any system of control is inefficient, and, therefore, its degree of control is partial.

James: A one-party state that has tried to exercise control over most aspects of a society and that has, broadly speaking, managed to do so is totalitarian. Such a system's practical inefficiencies do not limit the aptness of the term, which does not describe a state's actual degree of control as much as it describes the nature of a state's ambitions.

19. Which one of the following most accurately expresses Maria's main conclusion?
- (A) No state can be called totalitarian without inviting a mistaken belief.
 - (B) To be totalitarian, a state must totally control society.
 - (C) The degree of control exercised by a state is necessarily partial.
 - (D) No existing state currently has even one aspect of society under total control.
 - (E) Systems of control are inevitably inefficient.
20. James responds to Maria's argument by
- (A) pointing out a logical inconsistency between two statements she makes in support of her argument
 - (B) offering an alternative explanation for political conditions she mentions
 - (C) rejecting some of the evidence she presents without challenging what she infers from it
 - (D) disputing the conditions under which a key term of her argument can be appropriately applied
 - (E) demonstrating that her own premises lead to a conclusion different from hers
21. The similarity between ichthyosaurs and fish is an example of convergence, a process by which different classes of organisms adapt to the same environment by independently developing one or more similar external body features. Ichthyosaurs were marine reptiles and thus do not belong to the same class of organisms as fish. However, ichthyosaurs adapted to their marine environment by converging on external body features similar to those of fish. Most strikingly, ichthyosaurs, like fish, had fins.
- If the statements above are true, which one of the following is an inference that can be properly drawn on the basis of them?
- (A) The members of a single class of organisms that inhabit the same environment must be identical in all their external body features.
 - (B) The members of a single class of organisms must exhibit one or more similar external body features that differentiate that class from all other classes of organisms.
 - (C) It is only as a result of adaptation to similar environments that one class of organisms develops external body features similar to those of another class of organisms.
 - (D) An organism does not necessarily belong to a class simply because the organism has one or more external body features similar to those of members of that class.
 - (E) Whenever two classes of organisms share the same environment, members of one class will differ from members of the other class in several external body features.

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22. Further evidence bearing on Jamison's activities must have come to light. On the basis of previously available evidence alone, it would have been impossible to prove that Jamison was a party to the fraud, and Jamison's active involvement in the fraud has now been definitively established.

The pattern of reasoning exhibited in the argument above most closely parallels that exhibited in which one of the following?

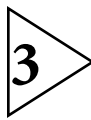
- (A) Smith must not have purchased his house within the last year. He is listed as the owner of that house on the old list of property owners, and anyone on the old list could not have purchased his or her property within the last year.
- (B) Turner must not have taken her usual train to Nantes today. Had she done so, she could not have been in Nantes until this afternoon, but she was seen having coffee in Nantes at 11 o'clock this morning.
- (C) Norris must have lied when she said that she had not authorized the investigation. There is no doubt that she did authorize it, and authorizing an investigation is not something anyone is likely to have forgotten.
- (D) Waugh must have known that last night's class was canceled. Waugh was in the library yesterday, and it would have been impossible for anyone in the library not to have seen the cancellation notices.
- (E) LaForte must have deeply resented being passed over for promotion. He maintains otherwise, but only someone who felt badly treated would have made the kind of remark LaForte made at yesterday's meeting.

23. Reporting on a civil war, a journalist encountered evidence that refugees were starving because the government would not permit food shipments to a rebel-held area. Government censors deleted all mention of the government's role in the starvation from the journalist's report, which had not implicated either nature or the rebels in the starvation. The journalist concluded that it was ethically permissible to file the censored report, because the journalist's news agency would precede it with the notice "Cleared by government censors."

Which one of the following ethical criteria, if valid, would serve to support the journalist's conclusion while placing the least constraint on the flow of reported information?

- (A) It is ethical in general to report known facts but unethical to do so while omitting other known facts if the omitted facts would substantially alter an impression of a person or institution that would be congruent with the reported facts.
- (B) In a situation of conflict, it is ethical to report known facts and unethical to fail to report known facts that would tend to exonerate one party to the conflict.
- (C) In a situation of censorship, it is unethical to make any report if the government represented by the censor deletes from the report material unfavorable to that government.
- (D) It is ethical in general to report known facts but unethical to make a report in a situation of censorship if relevant facts have been deleted by the censor, unless the recipient of the report is warned that censorship existed.
- (E) Although it is ethical in general to report known facts, it is unethical to make a report from which a censor has deleted relevant facts, unless the recipient of the report is warned that there was censorship and the reported facts do not by themselves give a misleading impression.

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24. A birth is more likely to be difficult when the mother is over the age of 40 than when she is younger. Regardless of the mother's age, a person whose birth was difficult is more likely to be ambidextrous than is a person whose birth was not difficult. Since other causes of ambidexterity are not related to the mother's age, there must be more ambidextrous people who were born to women over 40 than there are ambidextrous people who were born to younger women.

The argument is most vulnerable to which one of the following criticisms?

- (A) It assumes what it sets out to establish.
- (B) It overlooks the possibility that fewer children are born to women over 40 than to women under 40.
- (C) It fails to specify what percentage of people in the population as a whole are ambidextrous.
- (D) It does not state how old a child must be before its handedness can be determined.
- (E) It neglects to explain how difficulties during birth can result in a child's ambidexterity.

Questions 25–26

The government has no right to tax earnings from labor. Taxation of this kind requires the laborer to devote a certain percentage of hours worked to earning money for the government. Thus, such taxation forces the laborer to work, in part, for another's purpose. Since involuntary servitude can be defined as forced work for another's purpose, just as involuntary servitude is pernicious, so is taxing earnings from labor.

25. The argument uses which one of the following argumentative techniques?
- (A) deriving a general principle about the rights of individuals from a judgment concerning the obligations of governments
 - (B) inferring what will be the case merely from a description of what once was the case
 - (C) inferring that since two institutions are similar in one respect, they are similar in another respect
 - (D) citing the authority of an economic theory in order to justify a moral principle
 - (E) presupposing the inevitability of a hierarchical class system in order to oppose a given economic practice
26. Which one of the following is an error of reasoning committed by the argument?
- (A) It ignores a difference in how the idea of forced work for another's purpose applies to the two cases.
 - (B) It does not take into account the fact that labor is taxed at different rates depending on income.
 - (C) It mistakenly assumes that all work is taxed.
 - (D) It ignores the fact that the government also taxes income from investment.
 - (E) It treats definitions as if they were matters of subjective opinion rather than objective facts about language.

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.