

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. Psychiatrist: We are learning that neurochemical imbalances can cause behavior ranging from extreme mental illness to less serious but irritating behavior such as obsessive fantasizing, petulance, or embarrassment. These findings will promote compassion and tolerance when looking at a mental illness, quirk, or mere difference between two persons, since being mentally healthy can now begin to be seen as simply having the same neurochemical balances as most people.

Which one of the following most accurately expresses the conclusion of the psychiatrist's argument?

- (A) Understanding the role of the neurochemical in behavior will foster empathy toward others.
- (B) Neurochemical imbalances can cause mental illness and other behaviors.
- (C) Neurochemical balances and imbalances are the main determinants of mental behavior.
- (D) Being mentally healthy is a matter of having the same neurochemical balances as most people.
- (E) Advances in neurochemistry enhance our theories of mental illness.

2. No one wants this job as much as Joshua does, but he is not applying for it. It follows that there will not be any applicants, no matter how high the salary that is being offered.

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

- (A) Beth knows better than anyone else how to spot errors in a computer program, yet even she has not found any in this program so far. So it is clear that the errors must all be in the rest of the program.
- (B) If anyone can decipher this inscription, it is Professor Alvarez, but she is so involved with her new research that it will be impossible to interest her in this sort of task. Therefore, all we can do now is hope to find someone else.
- (C) Although he has the strongest motive of anyone for buying Anna's plot of land, Manfred is not pursuing the matter. Therefore, regardless of how low a price Anna is prepared to accept, she will be looking for a buyer in vain.
- (D) The person initially most interested in obtaining the contract was Mr. Moore, but he of all people suddenly withdrew his bid. This means that, no matter how discouraged the other bidders had been, they will now redouble their efforts.
- (E) Three times Paul would have liked to take advantage of a special vacation package for himself and his family, but each time he was indispensable at the factory just then. So the more seniority Paul acquires, the greater are the constraints on his personal life.

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3. Many people limit the intake of calories and cholesterol in their diet in order to lose weight and reduce the level of cholesterol in their blood. When a person loses weight, the fat cells in that person's body decrease in size but not in number. As they decrease in size, fat cells spill the cholesterol they contain into the bloodstream. Therefore, a person who goes on a low-calorie, low cholesterol diet _____.

Which one of the following most logically completes the argument?

- (A) might at first have an increased level of cholesterol in his or her blood
- (B) will not lose weight any faster than will a person whose diet is high in calories
- (C) might lose more weight by going on a low calorie, high-cholesterol diet than by going on the low-calorie, low-cholesterol diet
- (D) will not decrease the size of his or her fat cells
- (E) will both decrease the level of cholesterol in his or her blood and gain weight

Questions 4-5

Advances in photocopying technology allow criminals with no printing expertise to counterfeit paper currency. One standard anticounterfeiting technique, microprinting, prints paper currency with tiny designs that cannot be photocopied distinctly. Although counterfeits of microprinted currency can be detected easily by experts, such counterfeits often circulate widely before being detected. An alternative, though more costly, printing technique would print currency with a special ink. Currency printed with the ink would change color depending on how ordinary light strikes it, whereas photocopied counterfeits of such currency would not. Because this technique would allow anyone to detect photocopied counterfeit currency easily, it should be adopted instead of microprinting, despite the expense.

4. Which one of the following, if true, provides the most support for the recommendation made by the argument?
- (A) When an anticounterfeiting technique depends on the detection of counterfeits by experts, the cost of inspection by experts adds significantly to the cost to society of that technique.
 - (B) For any anticounterfeiting technique to be effective, the existence of anticounterfeiting techniques should be widely broadcast, but the method by which counterfeits are detected should be kept secret.
 - (C) The process of microprinting paper currency involves fewer steps than does the printing of paper currency with the special ink.
 - (D) Before photocopying technology existed, most counterfeits of paper currency were accomplished by master engravers.
 - (E) Many criminals do not have access to the advanced photocopiers that are needed to produce counterfeits of microprinted paper currency that cashiers will accept as real.
5. Which one of the following, if true, most seriously undermines the argument?
- (A) The longer the interval between the time a counterfeit bill passes into circulation and the time the counterfeit is detected, the more difficult it is for law enforcement officials to apprehend the counterfeiter.
 - (B) Sophisticated counterfeiters could produce currency printed with the special ink but cannot duplicate microprinted currency exactly.
 - (C) Further advances in photocopying technology will dramatically increase the level of detail that photocopies can reproduce.
 - (D) The largest quantities of counterfeit currency now entering circulation are produced by ordinary criminals who engage in counterfeiting only briefly.
 - (E) It is very difficult to make accurate estimates of what the costs to society would be if large amounts of counterfeit currency circulated widely.

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

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

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

7. Generations of European-history students have been taught that a political assassination caused the First World War. Without some qualification, however, this teaching is bound to mislead, since the war would not have happened without the treaties and alliances that were already in effect and the military force that was already amassed. These were the deeper causes of the war, whereas the assassination was a cause only in a trivial sense. It was like the individual spark that happens to ignite a conflagration that was, in the prevailing conditions, inevitable.

Which one of the following most accurately restates the main point of the passage?

- (A) The assassination did not cause the war, since the assassination was only the last in a chain of events leading up to the war, each of which had equal claim to being called its "cause."
- (B) The war was destined to happen, since the course of history up to that point could not have been altered.
- (C) Though the statement that the assassination caused the war is true, the term "cause" more fundamentally applies to the conditions that made it possible for that event to start the war.
- (D) If the assassination had occurred when it did but less military force had at that time been amassed, then the war's outbreak might have been considerably delayed or the war might not have occurred at all.
- (E) Although the conditions prevailing at the time the war started made war inevitable, if the war had not been triggered by the assassination it would not have taken the course with which students of history are familiar.

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

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

- (A) Biting people is sometimes a way for toddlers to try to solve problems.
 - (B) Toddlers sometimes engage in biting people in order to get attention from adults.
 - (C) Toddlers mistakenly believe that biting people is viewed as acceptable behavior by adults.
 - (D) Toddlers do not recognize that by biting people they often thwart their own ends.
 - (E) Resorting to biting people is in some cases an effective way for toddlers to get what they want.
9. Consumer advocate: Last year's worldwide alarm about a computer "virus"—a surreptitiously introduced computer program that can destroy other programs and data—was a fraud. Companies selling programs to protect computers against such viruses raised worldwide concern about the possibility that a destructive virus would be activated on a certain date. There was more smoke than fire, however, only about a thousand cases of damage were reported around the world. Multitudes of antivirus programs were sold, so the companies' warning was clearly only an effort to stimulate sales.

The reasoning in the consumer advocate's argument is flawed because this argument

- (A) restates its conclusion without attempting to offer a reason to accept it
- (B) fails to acknowledge that antivirus programs might protect against viruses other than the particular one described
- (C) asserts that the occurrence of one event after another shows that the earlier event was the cause of the later one
- (D) uses inflammatory language as a substitute for providing any evidence
- (E) overlooks the possibility that the protective steps taken did work and, for many computers, prevented the virus from causing damage

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

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

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

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11. A Habitat Conservation Plan (HCP) is based on a law that allows developers to use land inhabited by endangered species in exchange for a promise to preserve critical habitat or provide replacement land nearby. Some individuals of endangered species are lost in return for assurances by the owner or developer that habitat for those remaining animals will be protected. Environmentalists are pleased that HCPs allow them to win concessions from developers who would otherwise ignore rarely enforced environmental laws. Satisfied property owners prefer HCPs to more restrictive prohibitions of land use.

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

- (A) In order to avoid protracted legal battles environmentalists should compromise with developers.
 - (B) Developers should adhere only to those environmental laws that are not overburdensome.
 - (C) Laws should not be designed to serve the interests of all the parties concerned since they are often so weak that no one's interest is served well.
 - (D) Laws should be fashioned in such a way as to reconcile the interests of developers and environmentalists.
 - (E) The most effective means of preserving endangered species is to refrain from alienating property owners.
12. It has long been thought that lizards evolved from a group of amphibians called anthracosaurs, no fossils of which have been found in any rocks older than 300 million years. However, a fossil of a lizard was recently found that is estimated to be 340 million years old. Lizards could not have evolved from creatures that did not exist until after the first lizards. Therefore, lizards could not have evolved from anthracosaurs.

An assumption made in the argument is that there are no

- (A) unknown anthracosaur fossils older than 340 million years
- (B) unknown lizard fossils older than 340 million years
- (C) known lizard fossils that predate some anthracosaur fossils
- (D) known anthracosaur fossils that predate some lizard fossils
- (E) known lizard fossils whose age is uncertain

Questions 13–14

Numismatist: In medieval Spain, most gold coins were minted from gold mined in West Africa, in the area that is now Senegal. The gold mined in this region was the purest known. Its gold content of 92 percent allowed coins to be minted without refining the gold, and indeed coins minted from this source of gold can be recognized because they have that gold content. The mints could refine gold and produced other kinds of coins that had much purer gold content, but the Senegalese gold was never refined.

13. Which one of the following inferences about gold coins minted in medieval Spain is most strongly supported by the information the numismatist gives?
- (A) Coins minted from Senegalese gold all contained the same weight, as well as the same proportion, of gold.
 - (B) The source of some refined gold from which coins were minted was unrefined gold with a gold content of less than 92 percent.
 - (C) Two coins could have the same monetary value even though they differed from each other in the percentage of gold they contained.
 - (D) No gold coins were minted that had a gold content of less than 92 percent.
 - (E) The only unrefined gold from which coins could be minted was Senegalese gold.
14. As a preliminary to negotiating prices, merchants selling goods often specified that payment should be in the coins minted from Senegalese gold. Which one of the following, if true, most helps to explain this preference?
- (A) Because refined gold varied considerably in purity, specifying a price as a number of refined-gold coins did not fix the quantity of gold received in payment.
 - (B) During this period most day-to-day trading was conducted using silver coins, though gold coins were used for costly transactions and long-distance commerce.
 - (C) The mints were able to determine the purity, and hence the value, of gold coins by measuring their density.
 - (D) Since gold coins' monetary value rested on the gold they contained, payments were frequently made using coins minted in several different countries.
 - (E) Merchants obtaining gold to resell for use in jewelry could not sell the metal unless it was first refined.

15. Some plants have extremely sensitive biological thermometers. For example, the leaves of rhododendrons curl when the temperature of the air around them is below 0°C (Celsius). Similarly, mature crocus blossoms open in temperatures above 2°C . So someone who simultaneously observed rhododendrons with uncurled leaves, crocuses with mature but unopened blossoms, and a thermometer showing 1°C could determine that the thermometer's reading was accurate to within plus or minus 1°C .

Which one of the following, if true, most seriously undermines the reasoning above?

- (A) Neither rhododendrons nor crocuses bloom for more than a few weeks each year, and the blossoms of rhododendrons growing in any area do not appear until at least several weeks after crocuses growing in that area have ceased to bloom.
- (B) Many people find it unpleasant to be outdoors for long periods when the temperature is at or about 1°C .
- (C) The climate and soil conditions that favor the growth of rhododendrons are also favorable to the growth of crocuses.
- (D) Air temperature surrounding rhododendrons, which can grow 12 feet tall, is likely to differ from air temperature surrounding crocuses, which are normally only a few inches high, by more than 2°C , even if the two plants are growing side by side.
- (E) Certain types of thermometers that are commonly used to measure outdoor temperatures can be extremely accurate in moderate temperature ranges but much less accurate in warmer or colder temperature ranges.

16. Political scientist: The dissemination of political theories is in principle able to cause change in existing social structures. However, all political theories are formulated in the educationally privileged setting of the university, leading to convoluted language that is alienating to many individuals outside academia who would be important agents of change. It follows that, with respect to political theory, there is a special role for those outside the university context to render it into accessible, clear language.

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

- (A) Persons outside academic settings are the most important agents of change to the social structure.
- (B) Persons within academic settings who formulate political theories attempt to change existing social structures.
- (C) Persons outside academic settings are better left out of the initial formulation of political theories.
- (D) Persons outside academic settings stand to gain more from the dissemination of political theories than persons inside.
- (E) Persons within academic settings are less willing or less able than persons outside to write in a straightforward way.

17. Nicotine has long been known to cause heart attacks and high blood pressure. Yet a recent study has shown that the incidence of heart attacks and high blood pressure is significantly higher among cigarette smokers who do not chew tobacco than among nonsmokers exposed to an equal amount of nicotine through tobacco chewing.

Which one of the following, if true, helps LEAST to resolve the apparent discrepancy described above?

- (A) People who smoke but do not chew tobacco tend to exercise less than those who chew tobacco but do not smoke.
- (B) Chemicals other than nicotine present in chewing tobacco but not present in cigarette smoke mitigate the effects that nicotine has on the cardiovascular system.
- (C) People who chew tobacco but do not smoke tend to have healthier diets than those who smoke but do not chew tobacco.
- (D) Chemicals other than nicotine present in chewing tobacco but not present in cigarette smoke can cause cancer.
- (E) Chemicals other than nicotine present in cigarette smoke but not present in chewing tobacco raise blood pressure.

18. President of Central Supply Company: Profits are at an all-time low this fiscal year because of decreased demand for our products. If this situation continues, the company may have to declare bankruptcy. So it is important to prevent any further decrease in profits. Consequently, the only options are to reduce planned expansion or to eliminate some less profitable existing operations.

Which one of the following most accurately describes a flaw, in the company president's reasoning?

- (A) It presumes without giving justification that survival of the company has been a good thing.
 - (B) It does not take into account that there are alternatives to declaring bankruptcy.
 - (C) It presumes without giving justification that only decreased demand can ever be the cause of decreased profits.
 - (D) It does not allow for the possibility that profits will decrease only slightly during the next fiscal year.
 - (E) It does not take into account that there may be other ways to stop the decrease in profits.
19. In all mammalian species, the period of a young mammal's life in which it is most frequently playful coincides with the period of most rapid growth of the neural connections in the mammal's brain that give rise to various complex patterns of movement, posture, and social response. Indeed, the neural connections created by frequent play during this period later become indispensable for the mammal's survival and well-being as an adult.

The statements above, if true, serve LEAST well as evidence for which one of the following?

- (A) Young mammals of species that are preyed on by other animals are likely to engage in forms of sudden mock flight, bolting away from locations where no predators are to be found.
- (B) The young of nonmammalian species such as fish, reptiles, and birds do not normally engage in playful behavior that serves the function served by play in the development of young mammals.
- (C) Adult mammals are more likely to engage in interactive play with their young if they engaged in similar forms of play when they themselves were young.
- (D) Mammals that cannot engage in certain common forms of play when young are likely to show certain deficits that limit their subsequent success as adults.
- (E) Young mammals of predatory species tend to practice in their play inoffensive versions of motions and actions that are useful in finding and catching prey when these mammals become adults.

20. Physicist: Determinism is the view that every event has a preceding cause sufficient for its occurrence. That is, if determinism is true, then the events that are presently occurring could not have failed to occur given the state of the universe a moment ago. Determinism, however, is false because it is impossible to know the complete state of the universe at any given time since it is impossible to measure accurately both the position and velocity of any given subatomic particle at a particular time.

The physicist's reasoning is most vulnerable to criticism on which one of the following grounds?

- (A) That it is impossible to measure accurately both the position and velocity of any given subatomic particle does not imply that it is impossible to know either the position or velocity of all subatomic particles.
 - (B) That the complete state of the universe at any given time is unknowable does not imply that the states at that time of the individual subatomic particles making it up are unknowable.
 - (C) That it is impossible to measure accurately both the position and velocity of any given subatomic particle at a particular time does not imply that its position or velocity cannot be accurately measured separately.
 - (D) That it is impossible to know the complete state of the universe at any given time does not imply that there is no complete state of the universe at that time.
 - (E) That the position and velocity of any given subatomic particle cannot be jointly measured with accuracy does not imply that this is the case for the position and velocity of all subatomic particles.
21. If this parking policy is unpopular with the faculty, then we should modify it. If it is unpopular among students, we should adopt a new policy. And, it is bound to be unpopular either with the faculty or among students.
- If the statements above are true, which one of the following must also be true?
- (A) We should attempt to popularize this parking policy among either the faculty or students.
 - (B) We should modify this parking policy only if this will not reduce its popularity among students.
 - (C) We should modify this parking policy if modification will not reduce its popularity with the faculty.
 - (D) If the parking policy is popular among students, then we should adopt a new policy.
 - (E) If this parking policy is popular with the faculty, then we should adopt a new policy.

22. It is an absurd idea that whatever artistic endeavor the government refuses to support it does not allow, as one can see by rephrasing the statement to read: No one is allowed to create art without a government subsidy.

The pattern of reasoning in which one of the following is most similar to that in the argument above?

- (A) The claim that any driver who is not arrested does not break the law is absurd, as one can see by rewording it: Every driver who breaks the law gets arrested.
- (B) The claim that any driver who is not arrested does not break the law is absurd, as one can see by rewording it: Every driver who gets arrested has broken the law.
- (C) The notion that every scientist who is supported by a government grant will be successful is absurd, as one can see by rewording it: No scientist who is successful is so without a government grant.
- (D) The notion that every scientist who is supported by a government grant will be successful is absurd, as one can see by rewording it: No scientist lacking governmental support will be successful.
- (E) The notion that every scientist who has been supported by a government grant will be successful is absurd, as one can see by rewording it: No scientist is allowed to do research without a government grant.

23. Politician: Nobody can deny that homelessness is a problem yet there seems to be little agreement on how to solve it. One thing, however is clear: ignoring the problem will not make it go away. Only if the government steps in and provides the homeless with housing will this problem disappear, and this necessitates increased taxation. For this reason, we should raise taxes.

Which one of the following principles, if valid, most supports the politician's argument?

- (A) Only if a measure is required to solve a problem should it be adopted.
- (B) Only if a measure is sufficient to solve a problem should it be adopted.
- (C) If a measure is required to solve a problem, then it should be adopted.
- (D) If a measure is sufficient to solve a problem, then it should be adopted.
- (E) If a measure is sufficient to solve a problem, any steps necessitated by that measure should be adopted.

24. Trade official: Country X deserves economic retribution for its protectionism. However, it is crucial that we recognize that there are overriding considerations in this case. We should still sell to X the agricultural equipment it ordered; there is high demand in our country for agricultural imports from X.

The argument depends on assuming which one of the following principles?

- (A) Agricultural components of international trade are more important than nonagricultural commodities.
- (B) The ability to keep popular products available domestically is less important than our being able to enter international markets.
- (C) We should never jeopardize the interests of our people to punish a protectionist country.
- (D) In most cases, punishing a protectionist country should have priority over the interests of our people.
- (E) We should balance the justice of an action with the consequences for our interests of undertaking that action.

25. Jack's aunt gave him her will, asking him to make it public when she died; he promised to do so. After her death, Jack looked at the will; it stipulated that all her money go to her friend George. Jack knew that if he made the will public, George would squander the money, benefiting neither George nor anyone else. Jack also knew that if he did not make the will public, the money would go to his own mother, who would use it to benefit herself and others, harming no one. After reflection, he decided not to make the will public.

Which one of the following principles, if valid, would require Jack to act as he did in the situation described?

- (A) Duties to family members take priority over duties to people who are not family members.
- (B) Violating a promise is impermissible whenever doing so would become known by others.
- (C) One must choose an alternative that benefits some and harms no one over an alternative that harms some and benefits no one.
- (D) When faced with alternatives it is obligatory to choose whichever one will benefit the greatest number of people.
- (E) A promise becomes nonbinding when the person to whom the promise was made is no longer living.

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.