

SECTION I

Time—35 minutes

25 Questions

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

1. Something must be done to ease traffic congestion. In traditional small towns, people used to work and shop in the same town in which they lived; but now that stores and workplaces are located far away from residential areas, people cannot avoid traveling long distances each day. Traffic congestion is so heavy on all roads that, even on major highways where the maximum speed limit is 55 miles per hour, the actual speed averages only 35 miles per hour.

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

- (A) The maximum speed limit on major highways should be increased.
 - (B) People who now travel on major highways should be encouraged to travel on secondary roads instead.
 - (C) Residents of the remaining traditional small towns should be encouraged to move to the suburbs.
 - (D) Drivers who travel well below the maximum speed limit on major highways should be fined.
 - (E) New businesses should be encouraged to locate closer to where their workers would live.
2. College professor: College students do not write nearly as well as they used to. Almost all of the papers that my students have done for me this year have been poorly written and ungrammatical.

Which one of the following is the most serious weakness in the argument made by the professor?

- (A) It requires confirmation that the change in the professor's students is representative of a change among college students in general.
- (B) It offers no proof to the effect that the professor is an accurate judge of writing ability.
- (C) It does not take into account the possibility that the professor is a poor teacher.
- (D) It fails to present contrary evidence.
- (E) It fails to define its terms sufficiently.

Questions 3-4

Mayor of Plainsville: In order to help the economy of Plainsville, I am using some of our tax revenues to help bring a major highway through the town and thereby attract new business to Plainsville.

Citizens' group: You must have interests other than our economy in mind. If you were really interested in helping our economy, you would instead allocate the revenues to building a new business park, since it would bring in twice the business that your highway would.

3. The argument by the citizens' group relies on which one of the following assumptions?
- (A) Plainsville presently has no major highways running through it.
 - (B) The mayor accepts that a new business park would bring in more new business than would the new highway.
 - (C) The new highway would have no benefits for Plainsville other than attracting new business.
 - (D) The mayor is required to get approval for all tax revenue allocation plans from the city council.
 - (E) Plainsville's economy will not be helped unless a new business park of the sort envisioned by the citizens' group is built.
4. Which one of the following principles, if accepted, would most help the citizens' group to justify drawing its conclusion that the mayor has in mind interests other than Plainsville's economy?
- (A) Anyone really pursuing a cause will choose the means that that person believes will advance the cause the farthest.
 - (B) Any goal that includes helping the economy of a community will require public revenues in order to be achieved.
 - (C) Anyone planning to use resources collected from a group must consult the members of the group before using the resources.
 - (D) Any cause worth committing oneself to must include specific goals toward which one can work.
 - (E) Any cause not pursued by public officials, if it is to be pursued at all, must be pursued by members of the community.

5. Recently, highly skilled workers in Eastern Europe have left jobs in record numbers to emigrate to the West. It is therefore likely that skilled workers who remain in Eastern Europe are in high demand in their home countries.

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

- (A) Eastern European factories prefer to hire workers from their home countries rather than to import workers from abroad.
 - (B) Major changes in Eastern European economic structures have led to the elimination of many positions previously held by the highly skilled emigrants.
 - (C) Many Eastern European emigrants need to acquire new skills after finding work in the West.
 - (D) Eastern European countries plan to train many new workers to replace the highly skilled workers who have emigrated.
 - (E) Because of the departure of skilled workers from Eastern European countries, many positions are now unfilled.
6. Historian: Alexander the Great should not be judged by appeal to current notions of justice. Alexander, an ancient figure of heroic stature, should be judged by the standards of his own culture. That is, did he live up to his culture's ideals of leadership? Did Alexander elevate the contemporary standards of justice? Was he, in his day, judged to be a just and wise ruler?

Student: But you cannot tell whether or not Alexander raised the contemporary standards of justice without invoking standards other than those of his own culture.

Which one of the following argumentative strategies does the student use in responding to the historian?

- (A) arguing that applying the historian's principle would require a knowledge of the past that is necessarily inaccessible to current scholarship
- (B) attempting to undermine the historian's principle by showing that some of its consequences are inconsistent with each other
- (C) showing that the principle the historian invokes, when applied to Alexander, does not justify the assertion that he was heroic
- (D) questioning the historian's motivation for determining whether a standard of behavior has been raised or lowered
- (E) claiming that one of the historian's criteria for judging Alexander is inconsistent with the principle that the historian has advanced

Questions 7-8

Two paleontologists, Dr. Tyson and Dr. Rees, disagree over the interpretation of certain footprints that were left among other footprints in hardened volcanic ash at site G. Dr. Tyson claims they are clearly early hominid footprints since they show human characteristics: a squarish heel and a big toe immediately adjacent to the next toe. However, since the footprints indicate that if hominids made those prints they would have had to walk in an unexpected cross-stepping manner, by placing the left foot to the right of the right foot, Dr. Rees rejects Dr. Tyson's conclusion.

- 7. The disagreement between the two paleontologists is over which one of the following?
 - (A) the relative significance of various aspects of the evidence
 - (B) the assumption that early hominid footprints are distinguishable from other footprints
 - (C) the possibility of using the evidence of footprints to determine the gait of the creature that made those footprints
 - (D) the assumption that evidence from one paleontologic site is enough to support a conclusion
 - (E) the likelihood that early hominids would have walked upright on two feet
- 8. Which one of the following, if true, most seriously undermines Dr. Tyson's conclusion?
 - (A) The footprints showing human characteristics were clearly those of at least two distinct individuals.
 - (B) Certain species of bears had feet very like human feet, except that the outside toe on each foot was the biggest toe and the innermost toe was the smallest toe.
 - (C) Footprints shaped like a human's that do not show a cross-stepping pattern exist at site M, which is a mile away from site G, and the two sets of footprints are contemporaneous.
 - (D) When the moist volcanic ash became sealed under additional layers of ash before hardening, some details of some of the footprints were erased.
 - (E) Most of the other footprints at site G were of animals with hooves.

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9. It is not known whether bovine spongiform encephalopathy (BSE), a disease of cattle invariably deadly to them, can be transmitted directly from one infected animal to another at all stages of the infection. If it can be, there is now a reservoir of infected cattle incubating the disease. There are no diagnostic tests to identify infected animals before the animals show overt symptoms. Therefore, if such direct transmission occurs, the disease cannot be eradicated by ____.

Which one of the following best completes the argument?

- (A) removing from the herd and destroying any diseased animal as soon as it shows the typical symptoms of advanced BSE
 - (B) developing a drug that kills the agent that causes BSE, and then treating with that drug all cattle that might have the disease
 - (C) destroying all cattle in areas where BSE occurs and raising cattle only in areas to which BSE is known not to have spread
 - (D) developing a vaccine that confers lifelong immunity against BSE and giving it to all cattle, destroying in due course all those animals for which the vaccine protection came too late
 - (E) developing a diagnostic test that does identify any infected animal and destroying all animals found to be infected
10. Auto industry executive: Statistics show that cars that were built smaller after 1977 to make them more fuel-efficient had a higher incidence of accident-related fatalities than did their earlier, larger counterparts. For this reason we oppose recent guidelines that would require us to produce cars with higher fuel efficiency.

Which one of the following, if true, would constitute the strongest objection to the executive's argument?

- (A) Even after 1977, large automobiles were frequently involved in accidents that caused death or serious injury.
- (B) Although fatalities in accidents involving small cars have increased since 1977, the number of accidents has decreased.
- (C) New computerized fuel systems can enable large cars to meet fuel efficiency standards established by the recent guidelines.
- (D) Modern technology can make small cars more fuel-efficient today than at any other time in their production history.
- (E) Fuel efficiency in models of large cars rose immediately after 1977 but has been declining ever since.

11. No one who lacks knowledge of a subject is competent to pass judgment on that subject. Since political know-how is a matter, not of adhering to technical rules, but of insight and style learned through apprenticeship and experience, only seasoned politicians are competent to judge whether a particular political policy is fair to all.

A major weakness of the argument is that it

- (A) relies on a generalization about the characteristic that makes someone competent to pass judgment
 - (B) fails to give specific examples to illustrate how political know-how can be acquired
 - (C) uses the term "apprenticeship" to describe what is seldom a formalized relationship
 - (D) equates political know-how with understanding the social implications of political policies
 - (E) assumes that when inexperienced politicians set policy they are guided by the advice of more experienced politicians
12. Impact craters caused by meteorites smashing into Earth have been found all around the globe, but they have been found in the greatest density in geologically stable regions. This relatively greater abundance of securely identified craters in geologically stable regions must be explained by the lower rates of destructive geophysical processes in those regions.

The conclusion is properly drawn if which one of the following is assumed?

- (A) A meteorite that strikes exactly the same spot as an earlier meteorite will obliterate all traces of the earlier impact.
- (B) Rates of destructive geophysical processes within any given region vary markedly throughout geological time.
- (C) The rate at which the Earth is struck by meteorites has greatly increased in geologically recent times.
- (D) Actual meteorite impacts have been scattered fairly evenly over the Earth's surface in the course of Earth's geological history.
- (E) The Earth's geologically stable regions have been studied more intensively by geologists than have its less stable regions.

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13. That the policy of nuclear deterrence has worked thus far is unquestionable. Since the end of the Second World War, the very fact that there were nuclear armaments in existence has kept major powers from using nuclear weapons, for fear of starting a worldwide nuclear exchange that would make the land of the power initiating it uninhabitable. The proof is that a third world war between superpowers has not happened.

Which one of the following, if true, indicates a flaw in the argument?

- (A) Maintaining a high level of nuclear armaments represents a significant drain on a country's economy.
 - (B) From what has happened in the past, it is impossible to infer with certainty what will happen in the future, so an accident could still trigger a third world war between superpowers.
 - (C) Continuing to produce nuclear weapons beyond the minimum needed for deterrence increases the likelihood of a nuclear accident.
 - (D) The major powers have engaged in many smaller-scale military operations since the end of the Second World War, while refraining from a nuclear confrontation.
 - (E) It cannot be known whether it was nuclear deterrence that worked, or some other factor, such as a recognition of the economic value of remaining at peace.
14. A survey of alumni of the class of 1960 at Aurora University yielded puzzling results. When asked to indicate their academic rank, half of the respondents reported that they were in the top quarter of the graduating class in 1960.

Which one of the following most helps account for the apparent contradiction above?

- (A) A disproportionately large number of high-ranking alumni responded to the survey.
- (B) Few, if any, respondents were mistaken about their class rank.
- (C) Not all the alumni who were actually in the top quarter responded to the survey.
- (D) Almost all of the alumni who graduated in 1960 responded to the survey.
- (E) Academic rank at Aurora University was based on a number of considerations in addition to average grades.

15. M: It is almost impossible to find a person between the ages of 85 and 90 who primarily uses the left hand.

Q: Seventy to ninety years ago, however, children were punished for using their left hands to eat or to write and were forced to use their right hands.

Q's response serves to counter any use by M of the evidence about 85 to 90 year olds in support of which one of the following hypotheses?

- (A) Being born right-handed confers a survival advantage.
 - (B) Societal attitudes toward handedness differ at different times.
 - (C) Forcing a person to switch from a preferred hand is harmless.
 - (D) Handedness is a product of both genetic predisposition and social pressures.
 - (E) Physical habits learned in school often persist in old age.
16. The seventeenth-century physicist Sir Isaac Newton is remembered chiefly for his treatises on motion and gravity. But Newton also conducted experiments secretly for many years based on the arcane theories of alchemy, trying unsuccessfully to transmute common metals into gold and produce rejuvenating elixirs. If the alchemists of the seventeenth century had published the results of their experiments, chemistry in the eighteenth century would have been more advanced than it actually was.

Which one of the following assumptions would allow the conclusion concerning eighteenth-century chemistry to be properly drawn?

- (A) Scientific progress is retarded by the reluctance of historians to acknowledge the failures of some of the great scientists.
- (B) Advances in science are hastened when reports of experiments, whether successful or not, are available for review by other scientists.
- (C) Newton's work on motion and gravity would not have gained wide acceptance if the results of his work in alchemy had also been made public.
- (D) Increasing specialization within the sciences makes it difficult for scientists in one field to understand the principles of other fields.
- (E) The seventeenth-century alchemists could have achieved their goals only if their experiments had been subjected to public scrutiny.

17. Sedimentary rock hardens within the earth's crust as layers of matter accumulate and the pressure of the layers above converts the layers below into rock. One particular layer of sedimentary rock that contains an unusual amount of the element iridium has been presented as support for a theory that a meteorite collided with the earth some sixty million years ago. Meteorites are rich in iridium compared to the earth's crust, and geologists theorize that a meteorite's collision with the earth raised a huge cloud of iridium-laden dust. The dust, they say, eventually settled to earth where it combined with other matter, and as new layers accumulated above it, it formed a layer of iridium-rich rock.

Which one of the following, if true, would counter the claim that the iridium-rich layer described in the passage is evidence for the meteorite collision theory?

- (A) The huge dust cloud described in the passage would have blocked the transmission of sunlight and lowered the earth's temperature.
 - (B) A layer of sedimentary rock takes millions of years to harden.
 - (C) Layers of sedimentary rock are used to determine the dates of prehistoric events whether or not they contain iridium.
 - (D) Sixty million years ago there was a surge in volcanic activity in which the matter spewed from the volcanoes formed huge iridium-rich dust clouds.
 - (E) The iridium deposit occurred at about the same time that many animal species became extinct and some scientists have theorized that mass dinosaur extinctions were caused by a meteorite collision.
18. Mary, a veterinary student, has been assigned an experiment in mammalian physiology that would require her to take a healthy, anesthetized dog and subject it to a drastic blood loss in order to observe the physiological consequences of shock. The dog would neither regain consciousness nor survive the experiment. Mary decides not to do this assignment.

Mary's decision most closely accords with which one of the following principles?

- (A) All other things being equal, gratuitously causing any animal to suffer pain is unjustified.
- (B) Taking the life of an animal is not justifiable unless doing so would immediately assist in saving several animal lives or in protecting the health of a person.
- (C) The only sufficient justification for experimenting on animals is that future animal suffering is thereby prevented.
- (D) Practicing veterinarians have a professional obligation to strive to prevent the unnecessary death of an animal except in cases of severely ill or injured animals whose prospects for recovery are dim.
- (E) No one is ever justified in acting with the sole intention of causing the death of a living thing, be it animal or human.

19. A tree's age can be determined by counting the annual growth rings in its trunk. Each ring represents one year, and the ring's thickness reveals the relative amount of rainfall that year. Archaeologists successfully used annual rings to determine the relative ages of ancient tombs at Pazyryk. Each tomb was constructed from freshly cut logs, and the tombs' builders were constrained by tradition to use only logs from trees growing in the sacred Pazyryk Valley.

Which one of the following, if true, contributes most to an explanation of the archaeologists' success in using annual rings to establish the relative ages of the tombs at the Pazyryk site?

- (A) The Pazyryk tombs were all robbed during ancient times, but breakage of the tombs' seals allowed the seepage of water, which soon froze permanently, thereby preserving the tombs' remaining artifacts.
- (B) The Pazyryk Valley, surrounded by extremely high mountains, has a distinctive yearly pattern of rainfall, and so trees growing in the Pazyryk Valley have annual rings that are quite distinct from trees growing in nearby valleys.
- (C) Each log in the Pazyryk tombs has among its rings a distinctive sequence of twelve annual rings representing six drought years followed by three rainy years and three more drought years.
- (D) The archaeologists determined that the youngest tree used in any of the tombs was 90 years old and that the oldest tree was 450 years old.
- (E) All of the Pazyryk tombs contained cultural artifacts that can be dated to roughly 2300 years ago.

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20. Experienced gardeners advise against planting snap peas after late April because peas do not develop properly in warm weather. This year, however, the weather was unusually cool into late June, and therefore the fact that these snap peas were planted in mid-May is unlikely to result in crop failure despite the experts' warnings.

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

- (A) According to many gardening authorities, tomatoes should not be planted near dill because doing so is likely to affect their taste adversely; however, since these tomatoes were grown near dill and taste fine, there is clearly no reason to pay much attention to the so-called experts' advice.
- (B) Since African violets do not thrive in direct sunlight, it is said that in this region these plants should be placed in windows facing north rather than south; however, since these south-facing windows are well shaded by evergreen trees, the African violets placed in them are likely to grow satisfactorily.
- (C) Where flowers are to be planted under shade trees, gardening experts often advise using impatiens since impatiens does well in conditions of shade; however, it is unlikely to do well under maple trees since maple tree roots are so near the surface that they absorb all available moisture.
- (D) Most seeds tend to germinate at much higher rates when planted in warm soil than when planted in cold soil; spinach seeds, however, are unlikely to germinate properly if the soil is too warm, and therefore experts advise that spinach should be planted earlier than most vegetables.
- (E) House plants generally grow best in pots slightly larger than their existing root systems, so the usual advice is to repot when roots first reach the sides of the pot; this rule should not be followed with amaryllis plants, however, because they are likely to do best with tightly compressed roots.

21. Whenever a major political scandal erupts before an election and voters blame the scandal on all parties about equally, virtually all incumbents, from whatever party, seeking reelection are returned to office. However, when voters blame such a scandal on only one party, incumbents from that party are likely to be defeated by challengers from other parties. The proportion of incumbents who seek reelection is high and remarkably constant from election to election.

If the voters' reactions are guided by a principle, which one of the following principles would best account for the contrast in reactions described above?

- (A) Whenever one incumbent is responsible for one major political scandal and another incumbent is responsible for another, the consequences for the two incumbents should be the same.
- (B) When a major political scandal is blamed on incumbents from all parties, that judgment is more accurate than any judgment that incumbents from only one party are to blame.
- (C) Incumbents who are rightly blamed for a major political scandal should not seek reelection, but if they do, they should not be returned to office.
- (D) Major political scandals can practically always be blamed on incumbents, but whether those incumbents should be voted out of office depends on who their challengers are.
- (E) When major political scandals are less the responsibility of individual incumbents than of the parties to which they belong, whatever party was responsible must be penalized when possible.

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22. Once people habitually engaged in conversation; now the television competes for their attention. When the television is on, communication between family members stops. Where there is no communication, family ties become frayed and eventually snap. Therefore, the only solution is to get rid of the television.

Which one of the following is most closely parallel in its reasoning to the flawed reasoning in the argument above?

- (A) Once friendships thrived on shared leisure time. But contemporary economic pressures minimize the amount of free time people have and thus jeopardize many friendships.
- (B) Once people listened to the radio while pursuing other activities. Now they passively watch television. Therefore, radio was less distracting for most people than television is.
- (C) Once sports enthusiasts regularly engaged in sports, but now they watch spectator sports when they could be getting physical exercise. Without physical exercise, health deteriorates. Therefore, the only remedy is to eliminate spectator sports.
- (D) Once people were willing to tailor their day to the constraints of a bus or train schedule; now they are spoiled by the private car. The only solution is for government to offer financial incentives to encourage the use of public transportation.
- (E) Once people did their shopping in urban retail districts, where they combined their shopping with other errands. Now many people shop in suburban malls, where they concentrate on shopping exclusively. Therefore, shopping has become a leisure time activity.

23. In essence, all rent-control policies involve specifying a maximum rent that a landlord may charge for a dwelling. The rationale for controlling rents is to protect tenants in situations where limited supply will cause rents to rise sharply in the face of increased demand. However, although rent control may help some tenants in the short run, it affects the rental-housing market adversely in the long run because landlords become reluctant to maintain the quality of their existing properties and even more reluctant to have additional rental-housing units built.

Which one of the following, if true, best explains the landlords' reluctance described above?

- (A) Tenants prefer low-quality accommodations with rent control to high-quality accommodations without it.
- (B) Rent control makes it very difficult for landlords to achieve reasonable returns on any investments in maintenance or in new construction.
- (C) Rent control is a common practice even though it does nothing to alleviate shortages in rental housing.
- (D) Rent control is generally introduced for political reasons and it takes political action to have it lifted again.
- (E) Tenants prefer rent control to the alternative of receiving direct government subsidies toward rents they cannot afford.

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24. Certain minor peculiarities of language are used unconsciously by poets. If such peculiarities appear in the works of more than one poet, they are likely to reflect the language in common use during the poets' time. However, if they appear in the work of only one poet, they are likely to be personal idiosyncrasies. As such, they can provide a kind of "fingerprint" that allows scholars, by comparing a poem of previously unknown authorship to the work of a particular known poet, to identify the poem as the work of that poet.

For which one of the following reasons can the test described above never provide conclusive proof of the authorship of any poem?

- (A) The labor of analyzing peculiarities of language both in the work of a known poet and in a poem of unknown authorship would not be undertaken unless other evidence already suggested that the poem of unknown authorship was written by the known poet.
- (B) A peculiarity of language that might be used as an identifying mark is likely to be widely scattered in the work of a poet, so that a single poem not known to have been written by that poet might not include that peculiarity.
- (C) A peculiarity of language in a poem of unknown authorship could be evidence either that the poem was written by the one author known to use that peculiarity or that the peculiarity was not unique to that author.
- (D) Minor peculiarities of language contribute far less to the literary effect of any poem than such factors as poetic form, subject matter, and deliberately chosen wording.
- (E) A poet's use of some peculiarities of language might have been unconscious in some poems and conscious in other poems, and the two uses would be indistinguishable to scholars at a later date.

25. Because of the recent transformation of the market, Quore, Inc., must increase productivity 10 percent over the course of the next two years, or it will certainly go bankrupt. In fact, however, Quore's production structure is such that if a 10 percent productivity increase is possible, then a 20 percent increase is attainable.

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

- (A) It is only Quore's production structure that makes it possible for Quore to survive the transformation of the market.
- (B) Quore will not go bankrupt if it achieves a productivity increase of 20 percent over the next two years.
- (C) If the market had not been transformed, Quore would have required no productivity increase in order to avoid bankruptcy.
- (D) Because of the transformation of the market, Quore will achieve a productivity increase of 10 percent over the next two years.
- (E) If a 20 percent productivity increase is unattainable for Quore, then it must go bankrupt.

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.