Like other tyrannies, the tyranny of the majority was at first, and is still vulgarly, held in dread, chiefly as operating through the acts of the public authorities. But reflecting persons perceived that when society is itself the tyrant—society collectively over the separate individuals who compose it—its means of tyrannising are not restricted to the acts which it may do by the hands of its political functionaries. Society can and does execute its own mandates; and if it issues wrong mandates instead of right, or any mandates at all in things with which it ought not to meddle, it practises a social tyranny more formidable than many kinds of political oppression, since, though not usually upheld by such extreme penalties, it leaves fewer means of escape, penetrating much more deeply into the details of life, and enslaving the soul itself. Protection, therefore, against the tyranny of the magistrate\(^1\) is not enough; there needs protection also against the tyranny of the prevailing opinion and feeling, against the tendency of society to impose, by other means than civil penalties, its own ideas and practices as rules of conduct on those who dissent from them; to fetter the development and, if possible, prevent the formation of any individuality not in harmony with its ways, and compel all characters to fashion themselves upon the model of its own. There is a limit to the legitimate interference of collective opinion with individual independence; and to find that limit, and maintain it against encroachment, is as indispensable to a good condition of human affairs as protection against political despotism.\(^2\)

But though this proposition is not likely to be contested in general terms, the practical question, where to place the limit—how to make the fitting adjustment between individual independence and social control—is a subject on which nearly everything remains to be done. All that makes existence valuable to anyone depends on the enforcement of restraints upon the actions of other people. Some rules of conduct, therefore, must be imposed—by law in the first place, and by opinion on many things which are not fit subjects for the operation of law. What these rules should be is the principal question in human affairs; but if we except a few of the most obvious cases, it is one of those which least progress has been made in resolving. No two ages, and scarcely any two countries, have decided it alike; and the decision of one age or country is a wonder to another. Yet the people of any given age and country no more suspect any difficulty in it than if it were a subject on which mankind had always been agreed. The rules which obtain among themselves appear to them self-evident and self-justifying. This all but universal illusion is one of the examples of the magical influence of custom, which is not only, as the proverb says, a second nature, but is continually mistaken for the first. The effect of custom, in preventing any misgiving respecting the rules of conduct which mankind impose on one another, is all the more complete because the subject is one on which it is not generally considered necessary that reasons should be given, either by one person to others, or by each to himself. People are accustomed to believe, and have been encouraged in the belief by some who aspire to the character of philosophers, that their feelings on subjects of this nature are better than reasons and render reasons unnecessary. The practical principle which guides them to their opinions on the regulation of human conduct is the feeling in each person’s mind that everybody should be required to act as he, and those with whom he sympathises, would like
1. In the third sentence of the first paragraph, the author mentions society’s ability to “execute its own mandates” primarily to

A suggest that the tyranny of the majority is predominantly a political rather than a social phenomenon

B encourage members of the general public to acknowledge the dangers posed by this ability

C challenge the assumption that “reflecting persons” have greater insight into social ills than other members of society

D introduce the primary conflict he sees a need to resolve

E clarify the nature of the subject matter he will discuss

2. In the context of the passage as a whole, the first paragraph primarily serves to

A undercut a common justification for a practice the author opposes

B identify factors that impeded the author’s freedom to investigate his subject

C express the author’s concern that his views will go unheard

D establish the context for the problem the author seeks to address

E cite a widely held argument in support of the author’s thesis

3. Which of the following quotations best represents the thesis statement of the passage?
“But reflecting persons perceived that when society is itself the tyrant—society collectively over the separate individuals who compose it—its means of tyrannising are not restricted to the acts which it may do by the hands of its political functionaries.” (paragraph 1, sentence 2)

“Protection, therefore, against the tyranny of the magistrate is not enough; there needs protection also against the tyranny of the prevailing opinion and feeling . . . .” (paragraph 1, sentence 4)

“But though this proposition is not likely to be contested in general terms, the practical question, where to place the limit—how to make the fitting adjustment between individual independence and social control—is a subject on which nearly everything remains to be done.” (paragraph 2, sentence 1)

“All that makes existence valuable to anyone depends on the enforcement of restraints upon the actions of other people.” (paragraph 2, sentence 2)

“No two ages, and scarcely any two countries, have decided it alike; and the decision of one age or country is a wonder to another.” (paragraph 2, sentence 5)

(The passage is part of a speech delivered in 1872.)

The various conditions of men and the different uses they make of their powers and opportunities in life, are full of puzzling contrasts and contradictions. Here, as elsewhere, it is easy to dogmatize, but it is not so easy to define, explain and demonstrate. The natural laws for the government, well-being and progress of mankind, seem to be equal and are equal; but the subjects of these laws everywhere abound in inequalities, discords and contrasts. We cannot have fruit without flowers, but we often have flowers without fruit. The promise of youth often breaks down in manhood, and real excellence often comes unheralded and from unexpected quarters.

The scene presented from this view is as a thousand arrows shot from the same point and aimed at the same object. United in aim, they are divided in flight. Some fly too high, others too low. Some go to the right, others to the left. Some fly too far and others, not far enough, and only a few hit the mark. Such is life. United in the quiver, they are divided in the air. Matched when dormant, they are unmatched in action.

When we attempt to account for greatness we never get nearer to the truth than did the greatest of poets and philosophers when he classified the conditions of greatness: “Some are born great, some achieve greatness and some have greatness thrust upon them.”* We may take our choice of these three separate explanations and make which of them we please, most prominent in our discussion. Much can certainly be said of superior mental endowments, and I should on some accounts, lean strongly to that theory, but
for numerous examples which seem, and do, contradict it, and for the depressing tendency such a theory must have on humanity generally.

This theory has truth in it, but it is not the whole truth. Men of very ordinary faculties have, nevertheless, made a very respectable way in the world and have sometimes presented even brilliant examples of success. On the other hand, what is called genius is often found by the wayside, a miserable wreck; the more deplorable and shocking because from the height from which it has fallen and the loss and ruin involved in the fall. There is, perhaps, a compensation in disappointment and in the contradiction of means to ends and promise to performance. These imply a constant effort on the part of nature to hold the balance between all her children and to bring success within the reach of the humblest as well as of the most exalted.

From apparently the basest metals we have the finest toned bells, and we are taught respect from simple manhood when we see how, from the various dregs of society, there come men who may well be regarded as the pride and as the watch towers of the race.

Steel is improved by laying on damp ground, and the rusty razor gets a keener edge after giving its dross to the dirt in which it has been allowed to lie neglected and forgotten. In like manner, too, humanity, though it lay among the ports, covered with the dust of neglect and poverty, may still retain the divine impulse and the element of improvement and progress. It is natural to revolt at squalor, but we may well relax our lip of scorn and contempt when we stand among the lowly and despised, for out of the rags of the meanest cradle there may come a great man and this is a treasure richer than all the wealth of the Orient.

* from William Shakespeare, Twelfth Night

**4. In the second paragraph, the author develops a comparison between life and “a thousand arrows shot from the same point and aimed at the same object” primarily to suggest that**
people exhibit remarkable diversity in their development over time

5. Which of the following best describes the function of the first two clauses of the passage’s final sentence (“It is natural . . . despised”) in the context of the passage as a whole?

A. They suggest that there are certain limitations to the author’s argument about greatness.

D. They urge a change in attitude that should follow logically from the author’s argument.

E. They emphasize the author’s argument by showing the dangers of pride.

6. Which of the following statements most directly expresses the author’s thesis in the passage?
Unit 4 Progress Check: MCQ

A. “[I]t is easy to dogmatize, but it is not so easy to define, explain and demonstrate.” (paragraph 1, sentence 2)

B. “The natural laws for the government, well-being and progress of mankind, seem to be equal and are equal.” (paragraph 1, sentence 3)

C. “We cannot have fruit without flowers, but we often have flowers without fruit.” (paragraph 1, sentence 4)

D. “[R]eal excellence often comes unheralded and from unexpected quarters.” (paragraph 1, sentence 5)  

E. “The scene presented from this view is as a thousand arrows shot from the same point and aimed at the same object.” (paragraph 2, sentence 1)

(This passage is an excerpt from a textbook published in the 1950s.)

Science is often defined inadequately as “an organized body of knowledge.” This would make cookbooks, Sears, Roebuck catalogues, and telephone books science, which they are not. Sometimes science is defined simply as rationality, but that would make much of theology and metaphysics science, which they are not. Rationality is logical consistency, lack of contradiction. It is to be distinguished from reasonableness, the quality of a mind open to arguments and evidence opposed to its beliefs: a willingness to reconsider. Rationalists can be quite unreasonable or dogmatic. Rationalist metaphysicians and theologians are often certain about premises which come from intuition or revelation. Even paranoiacs may be thought of as rationalists, for they are commonly most rigorous in reasoning. But their premises, which they cling to in spite of all evidence, are absurd.

WHAT SCIENCE IS

Science is empirical, rational, general, and cumulative; and it is all four at once. Science is empirical in that all its conclusions are subject to test by sense experience. Observation is the base on which science rests, but scientific observation is more than keeping one’s eyes open. It is observation made by qualified observers under controlled conditions of those things which confirm or disconfirm, verify or refute a theory. Sherlock Holmes* could tell by the stains on a vest what a man had eaten for breakfast. From a number of such observations he arrived at a theory about why and how a particular crime was committed. This procedure is excellent for detection but insufficient for science, because it yields only knowledge of particular events. Science would go on to ask why and how crime, not a particular crime, is committed. Science uses facts to test general theories and general theories to make predictions about particular
Scientific observations may be made of things as they exist, like the color of an apple or the temperature of the air, or it may be made of what results from an experiment. An experiment is the deliberate manipulation of conditions in order to bring about what we want to observe. If we want to test the hypothesis that a new plastic can withstand two hundred pounds of pressure without crumbling, we may have to create a situation in which such pressure is applied to a piece of the plastic, because it is unlikely that the situation already exists anywhere in the world, or if it does, that all other factors are kept constant. In some sciences, like astronomy, we do not sufficiently control the subject matter to experiment on it—even though we do control the conditions of observation—and we distinguish those sciences from others, like chemistry, in which experiment is possible, by calling the latter “experimental sciences.”

Although all scientific thought ultimately rests on observation, there are vast portions of it which are entirely rational: analysis of the meaning of terms, deductions from existent theories, explorations of the logical relations among concepts and among theories. Logic is applied to science constantly because logic contains the rules of valid thinking. The application of mathematics is often thought, erroneously, to be an index of the status of any science. Of course, the more it can be applied usefully within a science, the more advanced the science. For mathematics functions both as a language in which scientific laws are stated, giving them the utmost precision, elegance, and economy, and as the basis of measurement. Many of the most significant advances in physics, astronomy, and chemistry have depended on advances in and application of mathematics. Without calculus the work of Isaac Newton would have been impossible. Yet great scientific work in other fields, performed by men like Pasteur, Darwin, and Pavlov (with whose names pasteurization, evolution, and conditioned response in psychology are associated), has used little or no mathematics.

* a fictional detective

7. Which of the following best describes the function of the first sentence of the second paragraph (“Science is empirical, rational, general, and cumulative; and it is all four at once.”)?
A. It defends a previous claim by offering an example.

B. It previews the authors’ line of reasoning in their larger argument. [Verified]

C. It offers several competing definitions of a disputed term.

D. It acknowledges a claim commonly made by other authors.

E. It comments on a flaw in a line of reasoning discussed by the authors.

(The passage below is excerpted from a book published in 1983.)

Even without the appropriate toys and clothes, lessons in the art of being feminine lay all around me and I absorbed them all; the fairy tales that were read to me at night, the brightly colored advertisements I pored over in magazines before I learned to decipher the words, the movies I saw, the comic books I hoarded, the radio soap operas I happily followed whenever I had to stay in bed with a cold. I loved being a little girl, or rather I loved being a fairy princess, for that was who I thought I was.

As I passed through a stormy adolescence to a stormy maturity, femininity increasingly became an exasperation, a brilliant subtle esthetic that was bafflingly inconsistent at the same time that it was minutely, demandingly concrete, a rigid code of appearance and behavior defined by do's and don't-do's that went against my rebellious grain. Femininity was a challenge thrown down to the female sex, a challenge no proud, self-respecting young woman could afford to ignore, particularly one with enormous ambition that she nursed in secret, alternately feeding or starving its inchoate life in tremendous confusion.

"Don’t lose your femininity" and "Isn’t it remarkable how she manages to retain her femininity?" had terrifying implications. They spoke of a bottom-line failure so irreversible that nothing else mattered. The pinball machine was registered “tilt,” the game had been called. Disqualification was marked on the forehead of a woman whose femininity was lost. No records would be entered in her name, for she had destroyed her birthright in her wretched, ungainly effort to imitate a man. She walked in limbo, this hapless creature, and it occurred to me that one day I might see her when I looked in the mirror. If the danger was so palpable that warning notices were freely posted, wasn’t it possible that the small bundle
of resentments I carried around in secret might spill out and place the mark on my own forehead? Whatever quarrels with femininity I had I kept to myself; whatever handicaps femininity imposed, they were mine to deal with alone, for there was no women’s movement to ask the tough questions, or so brazenly disregard the rules.

Femininity, in essence, is a romantic sentiment, a nostalgic tradition of imposed limitations. Even as it hurries forward in the 1980s, putting on lipstick and high heels to appear well dressed, it trips on the ruffled petticoats and hoopskirts of an era gone by. Invariably and necessarily, femininity is something that women had more of in the past, not only in the historic past of prior generations, but in each woman’s personal past as well—in the virginal innocence that is replaced by knowledge, in the dewy cheek that is coarsened by age, in the “inherent nature” that a woman seems to misplace so forgetfully whenever she steps out of bounds. Why should this be so? The XX chromosomal message has not been scrambled, the estrogen-dominated hormonal balance is generally as biology intended, the reproductive organs, whatever use one has made of them, are usually in place, the breasts of whatever size are most often where they should be. But clearly, biological femaleness is not enough.

Femininity always demands more. It must constantly reassure its audience by a willing demonstration of difference, even when one does not exist in nature, or it must seize and embrace a natural variation and compose a rhapsodic symphony upon the notes. Suppose one doesn’t care to, has other things on her mind, is clumsy or tone-deaf despite the best instruction and training? To fail at the feminine difference is to appear not to care about men, and to risk the loss of their attention and approval. To be insufficiently feminine is viewed as a failure in core sexual identity, or as a failure to care sufficiently about oneself, for a woman found wanting will be appraised (and will appraise herself) as mannish or neutered or simply unattractive, as men have defined these terms.

We are talking, admittedly, about an exquisite esthetic. Enormous pleasure can be extracted from feminine pursuits as a creative outlet or purely as relaxation; indeed, indulgence for the sake of fun, or art, or attention, is among femininity’s great joys. But the chief attraction (and the central paradox, as well) is the competitive edge that femininity seems to promise in the unending struggle to survive, and perhaps to triumph.

8. In the first two paragraphs, the author contrasts experiences from her girlhood with those from her later life in order to
show that attitudes toward femininity can change over time

imply that uncritically embracing femininity is immature

argue that the strictures of femininity are less severe for young girls

foreground the comforting aspects of adhering to feminine ideals

introduce two different attitudes toward femininity

9. In the second paragraph, the author defines femininity as a “challenge” primarily to support which of the following points?

A. Behaving according to the demands of femininity was her primary ambition as an adolescent.

B. Reconciling the demands of femininity with her ambition presented difficulties.

C. Ignoring the demands of femininity was easier for her than fulfilling them.

D. Fulfilling the demands of feminility was at times risky for her.

E. Understanding the demands of femininity was harder for her than for her peers.

(1) Every second Monday in October, federal and some state agencies, banks, schools, and some businesses close their doors to celebrate Columbus Day. (2) The holiday, which commemorates Christopher Columbus’s landing in the Bahamas on October 12, 1492, was created to honor Italian American heritage in 1792, and was declared a federal holiday in 1937. (3) Berkeley, California, was the first city to adopt Indigenous Peoples’ Day in 1991, and dozens of municipalities, cities, and even a handful of states have followed suit. (4) A few celebrate this new holiday along with Columbus Day, but
most celebrate it instead of Columbus Day. (5) This piecemeal celebration is not enough, though. (6) To truly honor the indigenous population of the United States, Indigenous Peoples’ Day should be recognized as a federal holiday.

10. The writer wants to add a sentence after sentence 2 that previews the main line of reasoning in the paragraph. Which of the following best achieves this goal?

A. The Knights of Columbus, along with Italian American leader Generoso Pope, were instrumental in lobbying to have Columbus Day declared a federal holiday.

B. When President Franklin Delano Roosevelt declared Columbus Day a holiday, it was celebrated on October 12 of every year until 1971.

C. However, several states—Alaska, Florida, Hawaii, Oregon, South Dakota, and Vermont—do not celebrate Columbus Day at all.

D. In the last few decades, however, a new holiday has been celebrated on that second Monday in October: Indigenous Peoples’ Day.  

E. Instead of Columbus Day, however, people in Hawaii celebrate Discoverers’ Day on the second Monday in October.

(1) Do babies dream of bottles of milk, their parents’ faces, or a favorite rattle? (2) Scientists debate whether they dream at all. (3) Recent studies indicate that, contrary to popular belief, babies lack the cognitive ability to dream because their brains are too busy on other important tasks.

(4) So-called experts have long assumed that infants dream because they spend a large portion of their sleep time in REM sleep, the sleep stage in which older children and adults dream. (5) For example, Dr. Charles P. Pollak, who directs the Center for Sleep Medicine at New York-Presbyterian/Weill Cornell Medical Center, asserts that because babies undeniably have REM sleep, it’s only logical to infer that they dream. (6) Of course, he adds, there is no way to know what babies dream about, because they cannot tell anyone.

(7) Granted, child psychologist David Foulkes argues that babies use REM sleep for other purposes. (8) Although babies can do little more than eat, sleep, and cry, their brains are incredibly busy building neural pathways, processing what they have learned, and working on language development. (9) In fact, a recent study proves that newborns are even capable of learning in their sleep. (10) Scientists played musical tones to sleeping newborns just before blowing a puff of air onto their eyelids. (11) Within 15
minutes, according to brain scans, the babies had learned to tense their eyelids when they heard the tone.

(12) Not only are babies’ brains too busy during REM sleep to dream, says Foulkes, but they also lack the ability to imagine things visually, a skill necessary for dreaming. (13) In fact, according to his research, children don’t start dreaming until they are four or five years old, and even then, the dreams lack the vivid details and structured story lines that characterize adult dreams.

(14) For example, sometimes parents claim that they have witnessed their toddlers having terrible nightmares, which can be more frightening for the parents than for the toddlers. (15) Furthermore, it is only when children develop strong self-awareness, typically around age seven or eight, that they begin to place themselves in their dreams and have dreams with clear narratives. (16) Babies, Foulkes argues, are nowhere near that level of cognitive development.

11. The writer is considering adding the following sentence before sentence 1.
   Parents have long wondered what goes on in their infants’ minds as the children slumber through the majority of the day.
   Should the writer make this addition?
   A. Yes, because the sentence presents an intriguing question that focuses the audience on the topic of the passage.
   B. Yes, because the sentence hints at a discussion later in the passage of a brain study that sought to discover what babies dream of.
   C. Yes, because the sentence engages the audience with a personal anecdote about the parents of a newborn.
   D. No, because the sentence makes a generalization that is impossible to prove without a survey of parents.
   E. No, because the sentence contradicts evidence presented later in the passage about babies’ sleep habits.

12. Which version of sentence 3 (reproduced below) provides the most effective thesis statement for the passage?
   Recent studies indicate that, contrary to popular belief, babies lack the cognitive ability to dream because their brains are too busy on other important tasks.
   A. Recent studies indicate that babies lack the cognitive ability to dream because their brains are too busy on other important tasks.
   B. Recent studies show that babies do not dream because their brains are too busy on other important tasks.
   C. Babies do not dream because their brains are too busy on other important tasks.
   D. Babies lack the cognitive ability to dream because their brains are too busy on other important tasks.
   E. Babies do not dream because their brains are too busy on other important tasks.
Recent studies indicate that, contrary to popular belief, babies do not dream.

Research conducted by child psychologist David Foulkes indicates that, contrary to popular belief (such as that held by Dr. Charles P. Pollak), babies don’t dream during REM sleep.

Contrary to popular belief, babies do not dream, but their brains do use a large portion of the time they spend sleeping on building neural pathways.

Contrary to popular belief, parents of babies and toddlers should not worry about their children having nightmares because children do not start dreaming in the way with which adults are familiar until they are seven or eight years old.

(1) Language experts have long observed that children are better at mastering a second language than adults. (2) People who learn another language as kids can sound like native speakers, but adult language learners often make noticeable grammatical mistakes. (3) But when exactly in a person’s life does it become difficult to master the rules that govern a language? (4) While previous theories speculated that people can only acquire a new language at a young age, new research shows that this is completely wrong.

(5) Boston-area researchers found evidence that the time span for language acquisition lasts from infancy until early adulthood; this time span is known as the “critical period.” (6) Such a period also exists for the development of eyesight. (7) Prior studies had reached varying conclusions about the critical period: it closes just after birth; it stops around age 5; it lasts until age 13. (8) Dissatisfied with these studies’ small number of participants, the Boston researchers aimed for a large sampling of language users for a study of English grammar acquisition. (9) The researchers developed an online grammar quiz with follow-up questions about the quiz takers’ language background. (10) Getting nearly 700,000 responses, two-thirds from nonnative English speakers, the research team mapped the relationship between age and language fluency in extraordinary detail.

(11) The accuracy of answers to the questions on the grammar quiz plummeted for those who began learning English after age 17. (12) Though this result indicates that the critical period for language acquisition lasts longer than previous studies suggested, the achievement of native-speaker-level fluency seems to be out of reach for adult learners.

(13) On a deeper level, though, adult second-language learners should remain optimistic.
researchers found that optimal language learning doesn’t stop completely after the critical period: it continues for both native and nonnative speakers until around age 30. (15) And that’s not all there is to language. (16) Letting go of a desire for complete mastery of a language’s grammar can enable an adult learner to strive for basic competence in communication—an outcome best achieved, the researchers note, via educational programs that immerse students in the experience of a second language rather than ones that focus on rote learning.

13. The writer wants to change sentence 4 (reproduced below) to provide a more specific preview of the passage’s line of reasoning.

   While previous theories speculated that people can only acquire a new language at a young age, new research shows that this is completely wrong.

Which of the following pieces of information is most appropriate for the writer to include in the new version of the sentence?

A Information about previous theories that held that people can only acquire a new language when young

B Examples of the types of people who may be seeking to learn a new language

C An overview of the new study’s claim that optimal language acquisition can occur up to age 30 and even older adults can acquire basic competence in a language

D Explicit details regarding the different age ranges during which language learners can expect to achieve fluency, mastery, and basic competence in a new language

E The names and affiliations of the individuals who produced the new research

14. In context, which version of sentence 6 (reproduced below) provides the most effective explanation of the “critical period” mentioned in sentence 5?

   Such a period also exists for the development of eyesight.
Unit 4 Progress Check: MCQ

A (As it now)

B The concept pertains to the fields of developmental biology and developmental psychology.

C There are several helpful models of what this important period actually looks like for language acquisition.

D It was first developed by early educators such as Dr. Maria Montessori, though she referred to it as a "sensitive period."

E It designates the time in one's life during which the capacity to absorb the rules and structure of a language is maximized.

(1) In his book Silent Messages, Albert Mehrabian writes that in communications about feelings and attitudes, 93 percent of the message is conveyed by contextual information such as body language, pitch, and emphasis—elements sometimes called the "metamessage"—and only 7 percent is transmitted by the meaning of the words. (2) Since our social and work lives revolve more than ever around digital communications that lack these metamessages, it is no wonder that every year we see countless articles with titles like "How to Send Better Professional Emails and Texts" and "How Email Works." (3) These articles provide helpful advice, but for the most important messages, there is really no substitute for face-to-face conversations.

(4) People make ingenious efforts to find digital substitutes for in-person metamessages. (5) For example, they can capitalize whole words and follow them with multiple exclamation points in their digital messages to simulate the elevated pitch and volume of an excited voice. (6) But whereas the meanings of metamessages conveyed by body language and voice are widely understood, metamessages surrounding digital communications can evolve very quickly. (7) Linguist Deborah Tannen explains a situation in which the lack of mutual metamessages can lead to hurt feelings. (8) A student explained to Tannen that in emails to professors, he always included a salutation and a greeting to establish a clear tone before asking the question he was emailing about. (9) He complained that professors frequently responded with brief answers lacking these elements. (10) Tannen realized that her own short replies, which she had understood as comfortably informal, might be seen as abrupt and even rude by students.

(11) Tannen reports that she now thinks about her students' perspective and adopts a more formal tone in her emails. (12) Unfortunately, research suggests that when it comes to electronic messages, our efforts to understand others' feelings fall short. (13) In a 2016 study, psychologists Monica Riordan and Lauren Trichtinger found that test subjects were frequently inaccurate in assessing the emotional tone of emails,
even ones sent by friends. Even worse, subjects were much more confident in their interpretations of the emails from friends, raising the likelihood of misunderstanding and offense.

15. In sentence 6 (reproduced below), the writer wants to develop the argument of the passage by contrasting two types of metamessages. But whereas the meanings of metamessages conveyed by body language and voice are widely understood, metamessages surrounding digital communications can evolve very quickly. Which of the following versions of the underlined text would best accomplish this goal?

A (as it is now)
B those of metamessages in digital communications often are not
C studies show less attention to metamessages in digital communications
D the appropriateness of a metamessage may differ between types of digital communication
E it is not always easy to tell whom you are communicating with online, or how to interpret metamessages

(1) Space flights to other planets have long been a fixture of science fiction, and in 2017 the fiction appeared to come closer to reality when the National Aeronautics and Space Administration (NASA) announced it was prioritizing eventual piloted missions to Mars and other planets. (2) It may be too soon to start planning your Martian vacation, however: there are good reasons to doubt that humans will be able to undertake long-distance space flights.

(3) For example, the body begins to lose muscle mass and bone density in low-gravity environments because the pressure of Earth’s atmosphere is removed. (4) Astronauts struggle to walk after returning from a six-month space mission; the effects of a three-year flight and a stay on Mars would be far greater. (5) Similarly, humans have a natural cycle of wakefulness and sleep attuned to daytime and nighttime on Earth. (6) Anyone who has experienced jet lag can attest to the mental and physical effects of disrupting this cycle, but we can only imagine the consequences of disrupting it for years on end.

(7) It remains to be seen whether these problems can be diminished enough for long space voyages, and
it is true that monitoring, exercise, and technological fixes like sunlight-simulating LED lights have shown promise. (8) Other issues may be more troublesome. (9) Space missions are stressful, requiring long hours of repetitive activity performed in small, cramped spaces. (10) The stress lowers immune response even as outer space conditions cause microbes in astronauts’ bodies to mutate, potentially resulting in dangerous diseases. (11) Cosmic rays pose another health concern: a 2018 study from Georgetown University Medical Center found that prolonged exposure to cosmic radiation could lead to stomach and colon cancers. (12) Unless scientists can develop effective means of fighting these health risks, long-distance space travel may be too dangerous.

(13) With NASA's attention directed to the problems of long space missions, it is certainly possible that other nations will invest in similar research. (14) But it is also possible that further research will turn up new problems that have not even been identified yet.

16. The writer wants to add a concluding sentence that brings the argument to a unified end by summing up the main claim of the passage and returning to a theme from the first paragraph. Which of the following choices, if added after sentence 14, best accomplishes this goal?

A. It is thus likely that for many years to come, the only way for humans to have an experience exploring distant planets will be by opening a book or going to the movies rather than hopping on a rocket.

B. Ultimately, these problems are likely to be overcome, because the efforts of NASA are now being supplemented by those of private spaceflight companies.

C. It is nonetheless important to remain optimistic about reaching Mars—the first step to achieving a goal is to envision a successful outcome.

D. Some argue that NASA's space shuttle program took attention away from more ambitious goals and that preparing to go to Mars is a better direction for the agency.

E. Sending robots rather than humans eliminates many of the dangers and difficulties, but there is something uniquely inspiring about humans traveling into space.

(1) If you have ever felt overwhelmed by the barrage of emails, text messages, and social media notifications you receive every day, you are not alone. (2) Unsurprisingly, neuroscientists warn that the constant use of smartphones alters the brain, with potentially serious physiological and emotional costs.

(3) Most people can’t resist immediately checking their phones each time they buzz, chirp, or chime, and
scientists believe that compulsion is caused by a brain chemical called dopamine. (4) The release of dopamine in the brain is pleasurable, so people tend to repeat behaviors that trigger it. (5) Researchers studying the effects of smartphone use found that each time people received a phone notification, their brains had a surge of dopamine. (6) Crucially, the anticipation of a “reward” (signaled by each ding of the phone) caused more pleasure than the reward itself (the email or social media alert). (7) Our brains are aroused each time our phones buzz because of the unpredictability of what pops up on the screen: since any alert might signal something extraordinary, dopamine is released each time even though most alerts don’t amount to much.

(8) While dopamine rewards may cause the brain to crave these constant phone alerts, their effects on the body are harmful. (9) The incessant notifications cause the heart to pound faster, muscles to tighten, and breathing to get shorter—a fight-or-flight response. (10) And when we live in a perpetual state of stress, our prefrontal cortex, the part of the brain that controls reasoning, gets all wonky. (11) A vicious cycle ensues: people become addicted to constant phone interruptions even as those interruptions put stress on the body, making people more tired, anxious, and error prone. (12) They then crave more dopamine to feel better.

(13) So should people swear off smartphones? (14) Some have argued as much, citing studies that show links between excessive smartphone use and cognitive and social impairments. (15) Certainly, there are advantages to unplugging the devices—say, on weekends—to truly relax. (16) In particular, abandoning the technology altogether would be difficult, if not impractical, in a world that values connectedness. (17) And smartphone use has undeniable benefits besides mere convenience, such as long-distance friendships and exposure to new ideas.

17. The writer wants to add a sentence after sentence 1 to provide factual support for the introductory claim and focus the audience on the argument of the passage. Which of the following sentences best accomplishes this purpose?
Thanks to a process called neuroplasticity, the brain continually strengthens or weakens neural connections in response to stimuli from smartphones.

Researchers at Columbia University argue that “[w]e are becoming symbiotic with our computer tools, growing into interconnected systems that remember less by knowing information than by knowing where the information can be found.”

According to a recent Gallup Poll, only 21 percent of Americans say they “rarely” or “never” feel mental or emotional strain in their day-to-day lives.

A recent study found that 86 percent of Americans are stressed-out from constantly checking their smartphones.

Neuroscientist Susan Greenfield cautions that social media can become a platform for constructing an artificial identity to impress an audience of barely known “friends.”

18. The writer is considering deleting the underlined portion of sentence 3 (reproduced below), adjusting the capitalization as needed.

Most people can’t resist immediately checking their phones each time they buzz, chirp, or chime, and scientists believe that compulsion is caused by a brain chemical called dopamine.

Should the writer keep or delete this portion of the sentence?

A. Keep it, because it provides examples that help explain the scientific terminology used in the following sentence.

B. Keep it, because it provides sensory details that help the writer describe the concept being discussed in the paragraph.

C. Keep it, because it provides important context that supports the writer’s argument about smartphones.

D. Delete it, because it interrupts the logical flow of the sentence with details that are only tangentially relevant.

E. Delete it, because it does not provide an effective transition from the first part of the sentence to the rest of the paragraph.