Question ID 5251e5c9

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 5251e5c9

Duckweed is a small freshwater plant that is often exposed to zinc pollution. Sofia Vámos and colleagues collected samples of four duckweed ecotypes (genetically and geographically distinct populations within a species), along with water from each ecotype's habitat. Hypothesizing that each ecotype is adapted to its local conditions in ways that bolster its growth and resistance to pollutants, the researchers grew each ecotype in all four water samples and with three levels of zinc (none, low, high). (The researchers did not replicate local differences in light or temperature.) They found that the ecotypes grew equally well in all four water samples and that adding zinc consistently enhanced growth, regardless of concentration, suggesting that _____

Which choice most logically completes the text?

A. while the ecotypes are genetically and geographically distinct, those differences do not represent adaptations to local environmental conditions.

B. there may not be significant differences in the water that each ecotype inhabits, but there are significant differences in each ecotype's resistance to zinc pollution.

C. if each ecotype is indeed locally adapted as the researchers hypothesized, those adaptations are to other environmental conditions than the water each ecotype inhabits.

D. although the researchers' hypothesis does not appear to be supported, this may be because the levels of zinc exposure the plants in the experiment received did not match their exposure in their natural environments.

ID: 5251e5c9 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of Vámos and colleagues' experiment with four duckweed ecotypes. According to the text, the researchers hypothesized that each ecotype is adapted to its local habitat in ways that help it grow more effectively and better tolerate pollutants. To test this, they grew each ecotype in water collected from all four habitats and exposed them to three different zinc levels. If the hypothesis were correct, each ecotype would be expected to thrive more in water from its own habitat than in the other waters and to respond to zinc levels differently depending on the level of zinc pollution in its home environment. However, the results showed that every ecotype grew just as well in every water sample, and that zinc boosted growth the same way across all ecotypes no matter the concentration. In other words, the experiment found no evidence that these ecotypes have specifically adapted to their local water or their local zinc exposure. It follows, then, that if each ecotype is actually locally adapted, it is adapted not to the water conditions in its habitat but to other environmental factors—such as local light or temperature levels, which the text notes the researchers didn't account for in their experiment.

Choice A is incorrect because the findings presented in the text suggest only that the ecotypes' genetic and geographic differences don't represent adaptations to local water conditions and zinc levels, not that the differences don't represent adaptations to *any* local environmental conditions. Indeed, the text notes that the researchers didn't account for light or temperature levels in each habitat, suggesting the possibility that the ecotypes are adapted to those or other local environmental

factors. Choice B is incorrect because it contradicts the findings presented in the text. The text states that zinc consistently enhanced growth regardless of concentration, meaning the ecotypes all responded similarly to zinc. This uniform response indicates there *aren't* significant differences in their resistance to zinc pollution. Choice D is incorrect because the findings presented in the text don't demonstrate that the researchers' hypothesis of local adaptation isn't supported. That the ecotypes grew equally well in all of the water samples and equally benefited from added zinc at all levels, regardless of zinc levels in their natural environments, suggests only that the ecotypes aren't adapted to their local water conditions and zinc levels; these findings don't rule out the possibility that the ecotypes are adapted to other local factors in their habitats, such as light or temperature (which the text notes the researchers didn't examine).

Question Difficulty: Hard

Question ID 15c0ed26

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 15c0ed26

The Hubble Space Telescope (HST) is projected to maintain operation until at least 2030, but it has already revolutionized high-resolution imaging of solar-system bodies in visible and ultraviolet (UV) light wavelengths, notwithstanding that only about 6% of the bodies imaged by the HST are within the solar system. NASA researcher Cindy L. Young and colleagues assert that a new space telescope dedicated exclusively to solar-system observations would permit an extensive survey of minor solar-system bodies and long-term UV observation to discern how solar-system bodies change over time. Young and colleagues' recommendation therefore implies that the HST _____

Which choice most logically completes the text?

A. will likely continue to be used primarily to observe objects outside the solar system.

B. will no longer be used to observe solar system objects if the telescope recommended by Young and colleagues is deployed.

C. can be modified to observe the features of solar system objects that are of interest to Young and colleagues.

D. lacks the sensors to observe the wavelengths of light needed to discern how solar system bodies change over time.

ID: 15c0ed26 Answer

Correct Answer: A

Rationale

Choice A is the best answer. The HST will operate until at least 2030, but it's only observing stuff inside our solar system 6% of the time. If we could get a different telescope to observe stuff inside our solar system 100% of the time and take more extensive images of certain things, then the HST could continue to be used mainly for observing stuff outside the solar system.

Choice B is incorrect. This inference is too strong to be supported by the text. Even if the new telescope is deployed, the HST might still be used as it's being used now. Based on the text, the new telescope would just be used for more extensive and long-term imaging of solar system bodies, which doesn't necessarily overlap with the HST. Choice C is incorrect. This inference isn't supported. The text never mentions the possibility of modifying the HST, so there is no basis to make this inference. Rather, the researchers suggest using a different telescope to more closely observe certain objects. Choice D is incorrect. This inference is too strong to be supported. The text doesn't give us enough info to assume that the HST lacks any particular sensors.

Question Difficulty: Hard

Question ID 7b249420

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 7b249420

Biologist Natacha Bodenhausen and colleagues analyzed the naturally occurring bacterial communities associated with leaves and roots of wild *Arabidopsis thaliana*, a small flowering plant. The researchers found many of the same bacterial genera in both the plants' leaves and roots. To explain this, the researchers pointed to the general proximity of *A. thaliana* leaves to the ground and noted that rain splashing off soil could bring soil-based bacteria into contact with the leaves. Alternatively, the researchers noted that wind, which may be a source of bacteria in the aboveground portion of plants, could also bring bacteria to the soil and roots. Either explanation suggests that _____

Which choice most logically completes the text?

A. bacteria carried by wind are typically less beneficial to *A. thaliana* than soil-based bacteria are.

B. some bacteria in *A. thaliana* leaves and roots may share a common source.

C. many bacteria in *A. thaliana* leaves may have been deposited by means other than rain.

D. *A. thaliana* leaves and roots are especially vulnerable to harmful bacteria.

ID: 7b249420 Answer

Correct Answer: B

Rationale

Choice B is the best answer. Both explanations suggest that the bacteria come from the same place: either they come from the ground and make their way to the leaves, or they come from above the ground and make their way to the roots.

Choice A is incorrect. This inference isn't supported. The text never discusses any benefits of any kind of bacteria. Choice C is incorrect. This conflicts with the text. One of the theories is that the bacteria in the leaves were deposited by rain splashing off soil. Choice D is incorrect. This inference isn't supported. The text only discusses "naturally occurring" bacteria. It never mentions either the harms or benefits of these bacteria.

Question Difficulty: Hard

Question ID e0d51f42

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: e0d51f42

Ancestral Puebloans, the civilization from which present-day Pueblo tribes descended, emerged as early as 1500 B.C.E. in an area of what is now the southwestern United States and dispersed suddenly in the late 1200s C.E., abandoning established villages with systems for farming crops and turkeys. Recent analysis comparing turkey remains at Mesa Verde, one such village in southern Colorado, to samples from modern turkey populations in the Rio Grande Valley of north central New Mexico determined that the latter birds descended in part from turkeys cultivated at Mesa Verde, with shared genetic markers appearing only after 1280. Thus, researchers concluded that _____

Which choice most logically completes the text?

A. conditions of the terrains in the Rio Grande Valley and Mesa Verde had greater similarities in the past than they do today.

B. some Ancestral Puebloans migrated to the Rio Grande Valley in the late 1200s and carried farming practices with them.

C. Indigenous peoples living in the Rio Grande Valley primarily planted crops and did not cultivate turkeys before 1280.

D. the Ancestral Puebloans of Mesa Verde likely adopted the farming practices of Indigenous peoples living in other regions.

ID: e0d51f42 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents the conclusion that most logically follows from the text's discussion of Ancestral Puebloans' migration to the Rio Grande Valley. The text states that in the late 1200s C.E., the Ancestral Puebloan civilization abandoned villages in its original homeland, which included the Mesa Verde site. The text goes on to say that recent genetic analysis has demonstrated that the modern turkey population in the Rio Grande Valley descends partly from the ancient turkeys raised at Mesa Verde, and that the genetic markers shared by the two turkey populations first appeared at Mesa Verde only after 1280 C.E. Therefore, it can reasonably be concluded that some Ancestral Puebloans migrated to the Rio Grande Valley in the late 1200s and carried their agricultural practices—including the farming of turkeys—to their new home.

Choice A is incorrect because the text never compares the condition of the Rio Grande Valley's terrain to that of Mesa Verde's terrain, either in the present or in the past. Choice C is incorrect. Although genetic analysis has demonstrated that the modern turkey population in the Rio Grande valley descended in part from the turkey population raised by the Ancestral Puebloans of Mesa Verde before their migration to the valley in 1280, this finding doesn't eliminate the possibility that Indigenous peoples living in the valley before 1280 might also have farmed turkeys. Choice D is incorrect. The text doesn't consider the possibility that before their migration to the Rio Grande Valley after 1280, the Ancestral Puebloans of Mesa Verde might have adopted turkey farming from an outside Indigenous civilization in another region; instead, the text provides evidence suggesting that the Ancestral Puebloans brought turkey farming to another region—the Rio Grande Valley—after 1280.

Question Difficulty: Hard

Question ID d8b38779

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: d8b38779

To address the susceptibility of materials used in components of high-performance machinery, such as aircraft engines, to creep (deformation that is induced by persistent mechanical stress and that often occurs at elevated temperatures), materials researchers have developed silicon carbide (SiC) fibers for producing aerospace composites. Testing the thermomechanical properties of several commercially available SiC fibers, Ramakrishna T. Bhatt et al. found that in comparison with two polymer-derived SiC fibers, a nitrogen-treated SiC fiber exhibited a lower minimum creep rate, a measure of the rate at which a stress-exposed material deforms at a constant temperature and uniaxial load. The finding suggests that _____

Which choice most logically completes the text?

A. unlike the two polymer-derived SiC fibers, the nitrogen-treated SiC fiber can substantially inhibit creep, provided that temperatures and loads are consistent.

B. the two polymer-derived SiC fibers likely hold similar potential for reducing the creep resistance of materials exposed to stress and elevated temperatures, thus prolonging the life span of aerospace machinery.

C. composites based on the two polymer-derived SiC fibers have chemical properties that may improve the mechanical and thermal stability of aerospace equipment to a greater extent than do composites based on the nitrogen-treated SiC fiber.

D. aerospace composites containing the nitrogen-treated SiC fiber may have the ability to withstand mechanical stress for a longer period of time than can aerospace composites containing either of the two polymer-derived SiC fibers.

ID: d8b38779 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of silicon carbide (SiC) fibers and creep, or deformation related to ongoing mechanical stress and elevated temperatures. The text states that Bhatt et al. found that a nitrogen-treated SiC fiber had a lower minimum creep rate than two polymer-derived SiC fibers did. Because having a lower creep rate means that the material is slower to deform with exposure to stress, as the text explains, this finding suggests that aerospace composites made with the nitrogen-treated SiC fiber may be able to withstand mechanical stress for a longer period than those made with the other two polymer-derived SiC fibers can.

Choice A is incorrect because it overstates the implications of the study's findings, which have to do with the rate of a material's deformation under stress, not the absolute degree of deformation. The text states that Bhatt et al. observed that a nitrogen-treated SiC fiber had a lower minimum creep rate than two polymer-derived SiC fibers did, meaning only that it deformed more slowly over time under constant stress, not that it underwent less deformation overall. Choice B is incorrect because the text doesn't establish any similarity between the two polymer-derived SiC fibers other than that both had a higher creep rate than the nitrogen-treated SiC fiber did in Bhatt et al.'s study. Moreover, reducing a material's resistance to creep would mean that the material becomes *more* susceptible to deformation with exposure to stress and elevated temperatures, which would be expected to shorten rather than prolong the lifespan of machinery made with that material. Choice C is incorrect because the text suggests

that the stability of aerospace equipment may be better improved by composites containing nitrogen-treated SiC fiber than by composites containing the two polymer-derived SiC fibers, not the other way around. The text indicates that Bhatt et al. observed that the nitrogen-treated SiC fiber had a lower minimum creep rate than the other two fibers did, meaning that it was slower to degrade under exposure to mechanical stress and elevated temperatures—suggesting that it may remain stable for longer periods.

Question Difficulty: Hard

Question ID ba427654

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: ba427654

Like many other genera of wild bees, bumblebees have in recent decades experienced population collapse caused by, among other factors, habitat destruction and climate variation. Bumblebees are also one of the most researched bee genera, second only to honeybees. As a result, ecologists have gained much of their insight about wild-bee declines from bumblebees. In a 2021 paper, zoologist Guillaume Ghisbain notes that bumblebees are among the relatively few wild-bee genera that display social behaviors and dietary generalism (ability to obtain nectar and pollen from a diversity of plant species), two traits that are associated with increased resilience to some specific environmental changes. Ghisbain therefore contends that _____

Which choice most logically completes the text?

A. although bumblebees and many other wild bees have experienced similar population declines in the past, compared with other wild bees, bumblebees are likely at greater risk of being harmed by climate variation than by habitat destruction.

B. although bumblebees have been more extensively studied than most wild bees, researchers should not use bumblebees to draw conclusions about the decline of other wild bees, even ones with feeding patterns and levels of sociability that are similar to those of bumblebees.

C. because bumblebees and other bees with generalist diets are less negatively affected by environmental stress than bees with specialized diets are, they are less likely to experience major population changes in the future than bees with specialized diets are.

D. because the responses of bumblebees and other wild bees to environmental threats are not always comparable, researchers need to exercise caution when extrapolating information about wild-bee population declines from bumblebees.

ID: ba427654 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of wild-bee declines. The text establishes that bumblebees and other wild bees have been experiencing population collapse as a result of habitat destruction, climate variation, and other factors. The text then indicates that because bumblebees are very extensively researched, ecologists rely heavily on findings about them to understand wild-bee declines in general. However, the text then introduces Ghisbain's observation that unlike most other wild-bee genera, bumblebees have certain traits (social behaviors and dietary generalism) linked to increased resilience to certain environmental changes. In other words, bumblebees aren't necessarily representative of wild bees as a whole because they are likely more tolerant of some pressures. Therefore, it logically follows that Ghisbain would urge researchers to exercise caution when using bumblebee data to draw conclusions about other wild-bee population declines, since bumblebees and other wild bees don't always respond comparably to environmental threats.

Choice A is incorrect because the text doesn't indicate that climate variation is more of a threat to bumblebees than habitat destruction is or that it is a bigger threat to bumblebees than it is to other wild bees. The text simply indicates that climate variation and habitat destruction are among the factors that have caused population collapses for bumblebees and other wild-bee

genera. Choice B is incorrect. As it is presented in the text, Ghisbain notes that bumblebees may respond to environmental changes differently than many other wild-bee genera do; this suggests that bumblebees shouldn't be treated as representative of all wild bees, but there's no reason to think that Ghisbain would go so far as to assert that bumblebee data shouldn't be used to draw conclusions about other wild-bee genera that are similar to bumblebees in their dietary and social traits, even if there are relatively few. The text suggests caution in extrapolation, not a complete rejection of using bumblebee research. Choice C is incorrect. Although the text indicates that dietary generalism is linked to increased resilience to specific environmental changes (that is, to some but not all environmental stresses), it doesn't suggest that bumblebees and other bees with this trait are less likely than bees with specialized diets to experience major population changes. In fact, the text makes it clear that like many other wild-bee genera—most of which don't display dietary generalism—bumblebees are already experiencing population collapse.

Question Difficulty: Hard

Question ID 93fe6af0

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 93fe6af0

The widespread use of social media enables linguists to study changes in language usage in real time. A notable recent example is the proliferation of the affix *meng-* among speakers of Bahasa Indonesia, the official language of Indonesia. Linguists observed *meng-* originate as an onomatopoetic tag that social-media users applied to images of cats they posted; over time, users increasingly applied it as a prefix to existing words (e.g., *mengsedih* affixes *meng-* to the word for *sad*) in text that they posted. From there, it has begun to move into spoken Bahasa Indonesia. Linguists have noted many similar examples of this phenomenon occurring in other languages, suggesting that social media _____

Which choice most logically completes the text?

A. is more useful for studying informal language than for studying formal or official language.

B. appears to be exerting an exceptionally strong influence on the evolution of Bahasa Indonesia.

C. may give linguists a somewhat misleading sense of how languages are changing.

D. does not merely register changes in language usage but can facilitate such changes.

ID: 93fe6af0 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of linguists using social media to study changes in language usage in real time, providing the specific example of the affix *meng-* in Bahasa Indonesia. The text states that linguists first observed *meng-* being used as an onomatopoeic tag on social media, which then spread to being affixed to existing words in text posted on social media; from there, it has begun to move into spoken Bahasa Indonesia. As presented in the text, this progression from online usage to spoken language suggests that social media does more than just register or reflect changes in language—it can actively drive such changes. In the case of *meng-*, the text suggests, social media facilitated the movement of the affix from an online tag to part of spoken Bahasa Indonesia.

Choice A is incorrect because the text doesn't differentiate between social media's usefulness for studying informal versus formal or official language; it merely notes that Bahasa Indonesia is an official language. Choice B is incorrect because while the example given in the text focuses on changes in Bahasa Indonesia, the text doesn't provide any evidence that social media is exerting an exceptionally strong influence on the evolution of this particular language compared to others. In fact, the text states that "linguists have noted many similar examples of this phenomenon occurring in other languages," suggesting that social media's influence is evident across multiple languages and not unique to Bahasa Indonesia. Choice C is incorrect because the text never suggests that social media provides a somewhat misleading sense of how languages are changing. Rather, the text suggests that by allowing linguists to directly observe linguistic changes, social media offers a clear window into language evolution.

Question Difficulty: Hard

Question ID 349fa4d2

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 349fa4d2

Tatiana R. Feuerborn and colleagues analyzed the genomes of more than a hundred domesticated dogs from sites in Siberia dating from 11,000 years ago to the present. They found that the dogs constituted a genetically isolated population of Arctic breeds until approximately 2,000 years ago, at which point there was substantial interbreeding with Near Eastern dog breeds. Furthermore, beginning around 2,000 years ago, some sites contain artifacts consistent with a Near East origin, like glass beads, but the people show no evidence of having traveled extensively outside Siberia. From this, Feuerborn and colleagues concluded that around 2,000 years ago _____

Which choice most logically completes the text?

A. dogs and artifacts like glass beads began to be transported from the Near East to Siberia.

B. people from Siberia began to reach the Near East, where they acquired dogs and artifacts such as glass beads.

C. glass beads and other artifacts from the Near East began to be exchanged for dogs from Siberia.

D. dogs from the Near East began to be exchanged for glass beads and other artifacts from Siberia.

ID: 349fa4d2 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents the conclusion that most logically follows from the text's discussion of Feuerborn and colleagues' findings about sites in Siberia. The text states that genomic analysis of many domesticated dogs from Siberian sites dating from the last 11,000 years revealed that the dogs represented a genetically isolated population of breeds (that is, they didn't reproduce with dogs of any outside breeds) until about 2,000 years ago, when there is evidence that the dogs began interbreeding with breeds from the Near East. The text also indicates that around the same time, the sites began to contain glass beads and other artifacts seeming to be from the Near East, even though there is no evidence that the people of those sites traveled widely outside Siberia. Because there is evidence of Near East dog breeds and Near East artifacts at Siberian sites beginning about 2,000 years ago but no evidence of the people's travel to the Near East around that time, it's reasonable to infer that Feuerborn and colleagues concluded that dogs and artifacts like glass beads were transported to Siberia from the Near East, starting around 2,000 years ago.

Choice B is incorrect because the text explicitly states that there is no evidence that the people of the Siberian sites 2,000 years ago traveled extensively beyond Siberia, which they would've had to do to reach the Near East; therefore, it wouldn't make sense to conclude that the presence of Near East dog breeds and artifacts like glass beads suggests that people from Siberia began arriving in the Near East around 2,000 years ago. Choice C is incorrect because the text addresses the presence of Near East dog breeds (and evidence of interbreeding with Siberian dogs) and artifacts like glass beads at Siberian sites starting about 2,000 years ago, suggesting only that the dogs and artifacts started to arrive in Siberia around that time. The text doesn't suggest the purpose of the arrival of the Near East dogs and artifacts or give any indication of Siberian dog breeds being transported elsewhere through trade. Choice D is incorrect because the text addresses the presence of Near East dog breeds and artifacts like

glass beads at Siberian sites starting about 2,000 years ago, suggesting only that the dogs and artifacts started to arrive in Siberia around that time; it doesn't suggest the purpose of this arrival and makes no mention of Siberian glass beads or other artifacts of Siberian origin.

Question Difficulty: Hard

Question ID 66b10ad8

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 66b10ad8

A team of biologists led by Jae-Hoon Jung, Antonio D. Barbosa, and Stephanie Hutin investigated the mechanism that allows *Arabidopsis thaliana* (thale cress) plants to accelerate flowering at high temperatures. They replaced the protein ELF3 in the plants with a similar protein found in another species (stiff brome) that, unlike *A. thaliana*, displays no acceleration in flowering with increased temperature. A comparison of unmodified *A. thaliana* plants with the altered plants showed no difference in flowering at 22° Celsius, but at 27° Celsius, the unmodified plants exhibited accelerated flowering while the altered ones did not, which suggests that _____

Which choice most logically completes the text?

A. temperature-sensitive accelerated flowering is unique to *A. thaliana*.

B. *A. thaliana* increases ELF3 production as temperatures rise.

C. ELF3 enables *A. thaliana* to respond to increased temperatures.

D. temperatures of at least 22° Celsius are required for *A. thaliana* to flower.

ID: 66b10ad8 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of accelerated flowering in *A. thaliana* plants. The text indicates that *A. thaliana* plants show accelerated flowering at high temperatures. To investigate the mechanism for this accelerated flowering, biologists replaced the ELF3 protein in one group of *A. thaliana* plants with a similar protein found in another plant species that doesn't show accelerated flowering. The team then compared these modified plants to *A. thaliana* plants that retained their original ELF3 protein. The text states that the two samples of plants showed no difference in flowering at 22° Celsius, but at 27° Celsius the unaltered plants with ELF3 showed accelerated flowering while the plants without ELF3 didn't. If accelerated flowering at the higher temperature occurred in the *A. thaliana* plants with ELF3 but not in the plants without the protein, then ELF3 likely enables *A. thaliana* to respond to increased temperatures.

Choice A is incorrect because the text doesn't mention whether any plants other than *A. thaliana* and stiff brome show temperature-sensitive flowering, so there is no support for the idea that this type of flowering is unique to *A. thaliana*. Choice B is incorrect because the text discusses the effects of ELF3 and not the production of it. There's nothing in the text to suggest that the amount of ELF3 in *A. thaliana* varies with temperature. Choice D is incorrect. While the text states that there was no difference in the flowering of modified and unmodified *A. thaliana* plants at 22° Celsius, there's no suggestion that *A. thaliana* only begins to flower at 22° Celsius; the text doesn't mention a specific temperature threshold required for *A. thaliana* flowering.

Question Difficulty: Hard

Question ID 5c37d685

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 5c37d685

To investigate the history of plate subduction—when one of Earth's tectonic plates slides beneath another—Sarah M. Aarons and colleagues compared ancient rocks from the Acasta Gneiss Complex in Canada to modern rocks. Using isotope analysis, the researchers found that Acasta rocks dating to about 4.02 billion years ago (bya) most strongly resemble modern rocks formed in a plume setting (an area in which hot rocks from Earth's mantle flow upward into the crust). By contrast, they found that Acasta rocks dating to about 3.75 bya and 3.6 bya have an isotope composition that is similar to that of modern rocks formed in a subduction setting. Aarons's team therefore concluded that _____

Which choice most logically completes the text?

A. subduction-like processes began occurring in some locations no later than 3.75 bya.

B. subduction replaced mantle plume formation as the most common geological process by about 4.02 bya.

C. the majority of the rocks in the Acasta Gneiss Complex formed through subduction.

D. the rocks in the Acasta Gneiss Complex are of a more recent origin than scientists previously thought.

ID: 5c37d685 Answer

Correct Answer: A

Rationale

Choice A is the best answer. Because researchers found "Acasta rocks dating to about 3.75 bya" were similar to "modern rocks formed in a subduction setting," we can infer that subduction-like processes must have begun occurring in the Acasta Gneiss Complex by this time.

Choice B is incorrect. We only know about geological processes at the Acasta Gneiss Complex, so we do not have information to make inferences about geological processes in general. Also, notice that the rocks dated to 4.02 bya were found to still be formed in a plume setting, so the transition must have happened after this time. Choice C is incorrect. There's no mention in the passage of what proportion of the rocks within Acasta Gneiss Complex were formed through subduction, so there's no basis for this inference. Choice D is incorrect. The passage discusses various rocks in the Acasta Gneiss Complex that are dated to different periods of time, but nothing in the passage suggests that these dates are or were wrong.

Question Difficulty: Hard

Question ID 406c7467

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 406c7467

Some geologists have proposed designating the period from 1950 to the present as a new geological epoch (the Anthropocene) characterized by human impact on Earth, but they have struggled to identify reliable stratigraphic markers of the epoch's onset. Inta Dimante-Deimantovica and a research team investigated whether the initial appearance of primary microplastics—invented and mass-produced for industrial and other purposes, beginning around the middle of the twentieth century—in sedimentary layers could serve this role. The researchers analyzed European lake sediment profiles from the late eighteenth century to the present. Microplastics were present in all layers, likely because certain microplastic shapes enabled rapid downward migration. The researchers therefore concluded that _____

Which choice most logically completes the text?

A. the lowest sedimentary layer in which microplastics are found cannot be treated as indicative of the chronological beginning of the Anthropocene.

B. the presence of microplastics in sediment dating to the late eighteenth century casts doubt on the appropriateness of designating 1950 as the onset of the Anthropocene.

C. microplastics are not prevalent enough in sediment to serve as a reliable sign of the human impact characteristic of the Anthropocene.

D. using the earliest presence of microplastics as a stratigraphic marker of the beginning of the Anthropocene is likely to be viable in some locations but is not viable in Europe.

ID: 406c7467 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of microplastics as a proposed stratigraphic marker for the onset of the Anthropocene. The text indicates that although primary microplastics (used for industrial and other purposes) were invented and mass-produced beginning only around the mid-twentieth century, researchers found microplastics throughout European lake sediment profiles dating from the late eighteenth century to the present. According to the text, microplastics were in all layers of sediment likely because microplastics of certain shapes can rapidly migrate downward—that is, they can move into sedimentary layers that predate their manufacture. Since it can't be assumed that the date of a layer in which microplastics are found indicates when the microplastics were first deposited, it follows that the lowest sedimentary layer containing microplastics can't be treated as indicative of the chronological beginning of the Anthropocene.

Choice B is incorrect. The text explains that microplastics appeared in layers of sediment long predating 1950 likely because certain shapes allowed them to rapidly migrate downward—that is, the particles physically moved into older layers. This finding doesn't cast doubt on the appropriateness of considering 1950 as the onset of the Anthropocene; it doesn't suggest a flaw in thinking that humans' impact on Earth shifted around 1950 but simply suggests that the position of microplastics in sediment isn't useful as an indicator of such a shift. Choice C is incorrect because the issue presented in the text isn't a lack of prevalence

of microplastics (and though no quantity is indicated, microplastics were found across all the layers) but rather the inability to determine when microplastics were originally deposited, since the particles can migrate rapidly into older sediment layers. Choice D is incorrect because the text indicates that the likely cause of microplastics being present in all layers of the sediment profiles is a property of microplastic particles themselves (certain shapes allowing them to rapidly move downward into older layers), not a characteristic of European lake sediment or anything else specific to Europe. There's no reason to think the issue of particle migration wouldn't occur in other locations.

Question Difficulty: Hard

Question ID 0c20fb42

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 0c20fb42

An analysis by Alain Elayi and colleagues of coins minted in Sidon in the fifth and fourth centuries BCE reveals a change in their composition over time: while a coin from circa 450 BCE contains about 98% silver and 1% copper, a coin from 367 BCE (the end of Ba'alšillem II's reign) contains 74.2% silver and 24.7% copper, giving it a relatively yellowish appearance that traders would have noticed. Because coins with a silver content below 80% were widely considered unsuitable for trade, Elayi et al. speculate that a crisis in confidence in the currency occurred in Sidon around 367 BCE, which was likely relieved—despite Sidon's persistent oppressive financial obligations—as a result of Ba'alšillem II's successor Abd'aštart I's decision to _____

Which choice most logically completes the text?

A. proclaim that the percentage of silver in coins suitable for trade would be raised to a threshold higher than 80%.

B. keep the amount of silver in Sidonian coins consistent with that in coins minted in 367 BCE but decrease their weight.

C. begin minting heavier coins with a proportion of silver to copper similar to that in coins minted in 367 BCE.

D. fund the mining of some copper deposits that were not available to Ba'alšillem II.

ID: 0c20fb42 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of Sidonian coins. As the text explains, researchers determined that Sidonian coins were made of silver and copper and that from 450 BCE to 367 BCE, the percentage of silver in each coin decreased from 98% to 74.2% while the percentage of copper increased from 1% to 24.7%. The text indicates that because the coins containing less than 80% silver weren't considered suitable for trade (suggesting that copper was less valuable than silver) and looked different from coins containing more silver, the researchers suspect there was a serious loss in confidence in the currency in Sidon in 367 BCE when the copper content was high. It's reasonable to assume that it wasn't possible to boost confidence simply by devoting a greater amount of valuable silver to the currency, since Sidon was under significant and ongoing financial pressure; however, keeping the total amount of silver the same and reducing the amount of copper in the coins would have resulted in smaller coins with a higher percentage of silver. Therefore, it makes sense to suggest that Abd'aštart I (the ruler after 367 BCE) likely restored confidence in the currency by deciding to keep the amount of silver in Sidonian coins consistent with that in coins minted in 367 BCE but to decrease the coins' weight.

Choice A is incorrect because the text conveys that a crisis in confidence in the currency of Sidon likely occurred around 367 BCE because the percentage of silver in coins had fallen below 80% (presumably because Sidon's financial pressures meant that less silver was available for currency), making the coins unsuitable for trade. Thus, announcing that the threshold for the percentage of silver in coins would be raised—that is, that coins would need to contain even more than 80% silver to be suitable for trade—likely would have worsened the crisis rather than relieved it. Choice C is incorrect because the text strongly suggests that a crisis in confidence in the currency of Sidon was caused by the proportion of silver to copper in the coins in 367 BCE, with 74.2% being too little silver for the coins to be considered suitable for trade; therefore, it's unlikely that minting coins with a similar proportion of

silver to copper (that is, still around 74.2% silver) would have restored confidence, even if the coins were heavier. Choice D is incorrect because the text gives no indication that funding the mining of more copper would have relieved a crisis in confidence in the currency of Sidon. The text establishes that Sidonian coins that visibly contained copper weren't considered suitable for trade, so Abd'aštart I wouldn't have wanted to add even more copper to them, and it's unclear how else copper mining would affect views of the currency.

Question Difficulty: Hard

Question ID 4bc98629

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 4bc98629

Arthurian legends (tales related to the character of King Arthur) derive from many sources, such as *Vita Sancti Cadoci*, composed in the 11th century, and *Culhwch and Olwen* from the second half of the 12th century. One of the most significant sources, Geoffrey of Monmouth's *History of the Kings of Britain*, was written in the 1130s; some material from it was later adapted by the Norman poet Wace into the *Roman de Brut* in 1155. But Wace didn't merely adapt *History*, he added to it as well, introducing the famous Round Table at which Arthur's knights assembled, which suggests that _____

Which choice most logically completes the text?

A. *Roman de Brut* is more historically accurate than *History,* because *Culhwch and Olwen* had not been written when Geoffrey of Monmouth was writing his work.

B. Geoffrey of Monmouth was unaware of stories of the Round Table when composing his *History*, though historians know that works containing such stories were available to him.

C. Geoffrey of Monmouth's accounts of Arthurian legends in his *History* are more similar overall in content to the accounts in *Culhwch and Olwen* than they are to the accounts in *Roman de Brut*.

D. the Arthurian legends that the author of *Vita Sancti Cadoci* drew on would not have featured the Round Table.

ID: 4bc98629 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the discussion about the genealogy of Arthurian legends. The text establishes a chronology of Arthurian sources, with *Vita Sancti Cadoci* composed in the 11th century (the 1000s), Geoffrey of Monmouth's *History* written in the 1130s, Wace's *Roman de Brut* in 1155, and *Culhwch and Olwen* in the second half of the 12th century (1150–1200). Importantly, the text indicates that along with adapting Geoffrey's *History*, Wace added "the famous Round Table" to it. If Wace introduced the idea of the Round Table in 1155, it logically follows that this element was not present in earlier works. This suggests that the Arthurian legends that informed *Vita Sancti Cadoci*, which was written before both Geoffrey's and Wace's works, would not have featured the Round Table.

Choice A is incorrect because the text discusses several works that include legends about a character, King Arthur, but doesn't address the historical accuracy of the stories in those works or suggest that the creation of *Culhwch and Olwen* was relevant to any other works' accuracy. Choice B is incorrect because the text doesn't suggest that works containing stories of the Round Table were available to Geoffrey of Monmouth when he composed his *History* in the 1130s, whether he was aware of them or not; it instead suggests that the idea of the Round Table wasn't introduced until more than a decade later, when Wace added it to Geoffrey's *History*. Choice C is incorrect. Although the text indicates that the Arthurian legends in Geoffrey of Monmouth's *History* differ from those in Wace's *Roman de Brut* in that Wace added the idea of the Round Table, the text doesn't compare the overall content of the Arthurian legends in the two works and doesn't indicate anything about the overall content of the legends in *Culhwch and Olwen*.

Question Difficulty: Hard

Question ID bd6995af

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: bd6995af

Studies conducted in individual Western societies have demonstrated associations between personality traits and five musical factors (mellowness, unpretentiousness, sophistication, intensity, and contemporariness) underlying individual preferences for styles of Western music. To investigate these associations across cultures, David M. Greenberg et al. collected music-preference assessments for Western genres and self-reported personality traits from participants in fifty-three countries across six continents. The study confirmed that the five-factor framework accurately captured participants' tastes in Western music, and, moreover, the study found similar correlations between patterns of these factors and of personality traits, suggesting that _____

Which choice most logically completes the text?

A. across cultural contexts, people who share similar profiles of personality traits tend to prefer listening to similar types of Western music.

B. the five-factor framework can likely be used to predict preferences for non-Western music styles based on personality traits even if the characteristics of those styles substantially differ from characteristics of Western music styles.

C. the strength of the relationship between personality traits and musical preferences varies less across cultures than researchers had previously assumed.

D. people with a relatively high degree of familiarity with Western music styles are likely to express stronger preferences for those styles than people with a relatively low degree of familiarity with those styles are.

ID: bd6995af Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of the cross-cultural study on personality traits and music preferences. The text first explains that previous studies in individual Western societies had found links between personality traits and five musical factors that shape individual preferences for Western music styles. This finding suggests that people in those societies who have similar personality traits likely prefer listening to similar types of Western music. The text goes on to state that Greenberg et al. conducted a study that expanded this research to a broader, cross-cultural context (fifty-three countries across six continents). This study validated that the five-factor framework accurately represented participants' preferences for Western music and that the study found patterns linking those preferences to personality traits. It follows, then, that people with similar profiles of personality traits tend to prefer similar types of Western music across cultural contexts.

Choice B is incorrect because Greenberg et al.'s study examined only preferences for Western music styles, so the text provides no basis for inferring that the five-factor framework could predict preferences for non-Western music styles. The study was specifically limited to Western musical styles, and extending the study's findings to non-Western music would go beyond what the study investigated or supports. Choice C is incorrect because the text doesn't mention what researchers had previously assumed about cultural variation in the strength of the relationship between personality traits and musical preferences. The text presents the cross-cultural consistency of the association between musical preferences and personality traits as a new finding but doesn't

mention previous expectations or assumptions about this association. Choice D is incorrect because the text doesn't address familiarity with Western music styles or suggest that familiarity influences preference strength for those styles. Greenberg et al.'s study focused on the relationship between personality traits and musical preferences across cultural contexts, not on how exposure or familiarity might affect those preferences.

Question Difficulty: Hard

Question ID 787729f7

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 787729f7

Researchers recently found that disruptions to an enjoyable experience, like a short series of advertisements during a television show, often increase viewers' reported enjoyment. Suspecting that disruptions to an unpleasant experience would have the opposite effect, the researchers had participants listen to construction noise for 30 minutes and anticipated that those whose listening experience was frequently interrupted with short breaks of silence would thus _____

Which choice most logically completes the text?

A. find the disruptions more irritating as time went on.

B. rate the listening experience as more negative than those whose listening experience was uninterrupted.

C. rate the experience of listening to construction noise as lasting for less time than it actually lasted.

D. perceive the volume of the construction noise as growing softer over time.

ID: 787729f7 Answer

Correct Answer: B

Rationale

Choice B is the best answer. It most logically completes the text. The text tells us that disruptions to an enjoyable experience increase viewers' enjoyment. It also says that researchers suspect the opposite is true for disruptions to an unpleasant experience. Thus, we can infer that the researchers expect to find that the interrupted unpleasant experience was worse for listeners than the uninterrupted unpleasant experience.

Choice A is incorrect. It doesn't logically complete the text. The text never makes any claims about how irritating the disruptions themselves are perceived to be. Rather, the text says that pleasant experiences are perceived as more enjoyable with interruptions, and that the opposite is suspected to be true of unpleasant experiences. Choice C is incorrect. It doesn't logically complete the text. The text never makes any claims about how long any experience is perceived to be. Rather, the text says that pleasant experiences are perceived as more enjoyable with interruptions, and that the opposite is suspected to be true of unpleasant experiences. Choice D is incorrect. It doesn't logically complete the text. The text never makes any claims about how interruptions affect the perceived volume of the unpleasant or pleasant experience. Rather, the text says that pleasant experiences are perceived as more enjoyable with interruptions, and that the opposite is suspected to be true of unpleasant experiences.

Question Difficulty: Hard

Question ID a9aa25f9

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: a9aa25f9

“Gestures” in painting are typically thought of as bold, expressive brushstrokes. In the 1970s, American painter Jack Whitten built a 12-foot (3.7-meter) tool he named the “developer” to apply paint to an entire canvas in one motion, resulting in his series of “slab” paintings from that decade. Whitten described this process as making an entire painting in “one gesture,” signaling a clear departure from the prevalence of gestures in his work from the 1960s. Some art historians claim this shift represents “removing gesture” from the process. Therefore, regardless of whether using the developer constitutes a gesture, both Whitten and these art historians likely agree that _____

Which choice most logically completes the text?

A. any tool that a painter uses to create an artwork is capable of creating gestures.

B. Whitten’s work from the 1960s exhibits many more gestures than his work from the 1970s does.

C. Whitten became less interested in exploring the role of gesture in his work as his career progressed.

D. Whitten’s work from the 1960s is much more realistic than his work from the 1970s is.

ID: a9aa25f9 Answer

Correct Answer: B

Rationale

Choice B is the best answer. Whitten thinks the tool made “one gesture” paintings, while historians think the tool “removed gesture” from the process completely. But putting that debate aside, both Whitten and the historians would agree that the paintings he made with the tool in the ’70s have way fewer gestures than his paintings from the ’60s, in which gestures are “prevalent,” meaning widely and extensively present.

Choice A is incorrect. This inference isn’t supported. The text only discusses the “developer”—it never mentions other tools. Choice C is incorrect. This inference isn’t supported. If anything, the text suggests the opposite: that Whitten became more interested in exploring the role of gesture in his work as his career progressed, as his earlier paintings had many gestures, and his ’70s paintings only had “one gesture.” Choice D is incorrect. This inference isn’t supported. The text never discusses the “realism” of Whitten’s art.

Question Difficulty: Hard

Question ID 97042cf6

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 97042cf6

As the name suggests, dramaturges originated in theater, where they continue to serve a variety of functions: conducting historical research for directors, compiling character biographies for actors, and perhaps most importantly, helping writers of plays and musicals to hone the works' stories and characters. Performance scholar Susan Manning observes that many choreographers, like playwrights and musical theater writers, are concerned with storytelling and characterization. In fact, some choreographers describe the dances they create as expressions of narrative through movement; it is therefore unsurprising that _____

Which choice most logically completes the text?

A. dramaturges can have a profound impact on the artistic direction of plays and musicals.

B. choreographers developing dances with narrative elements frequently engage dramaturges to assist in refining those elements.

C. dances by choreographers who incorporate narrative elements are more accessible to audiences than dances by choreographers who do not.

D. some directors and actors rely too heavily on dramaturges to complete certain research tasks.

ID: 97042cf6 Answer

Correct Answer: B

Rationale

Choice B is the best answer. Dramaturges help playwrights with storytelling and characterization. Choreographers often tell stories through dance, so they are also concerned with storytelling and characterization. This suggests that the fact that choreographers seek the help of dramaturges with the storytelling aspects of their dances should be "unsurprising."

Choice A is incorrect. This inference isn't supported. The beginning of the text does imply that this is true, but the end is leading to a conclusion about how choreographers use dramaturges. Choice C is incorrect. This inference isn't supported. The text never mentions dances by choreographers who don't incorporate narrative elements. Choice D is incorrect. This inference isn't supported. The text mentions in passing that directors use dramaturges to conduct research, but it never suggests that directors and actors are too reliant on them. Also, the text is leading to a conclusion about how choreographers use dramaturges.

Question Difficulty: Hard

Question ID af9b0a70

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: af9b0a70

Indigenous cultures possess unique knowledge of the medicinal uses of plants. According to a 2021 study, 73 percent of the medicinal uses of plants native to North America are reflected in the vocabulary of a single Indigenous language. However, as more and more Indigenous people exclusively speak a globally dominant language, such as English, their ancestral languages fade from daily use. These facts lend added importance to tribal nations' efforts to preserve their languages. By ensuring the continued use of Cherokee, Ojibwe, and the hundreds of other Indigenous languages in what is now the United States, tribal nations are also _____

Which choice most logically completes the text?

A. increasing the number of medicinal plants represented in the vocabularies of Indigenous languages.

B. transmitting terms for medicinal plants from Indigenous languages to globally dominant languages.

C. preserving knowledge about the medicinal value of plants native to the tribal nations' lands.

D. ensuring that citizens of tribal nations have physical access to medicinal plants.

ID: af9b0a70 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of the relationship between Indigenous languages and knowledge of the medicinal uses of plants. The text states that Indigenous cultures possess special knowledge of the medicinal uses of plants, which is reflected in their vocabulary. The text then discusses how tribal nations are working to preserve their languages, whose daily use is declining as globally dominant languages become increasingly dominant in Indigenous communities. Given that the languages of tribal nations in what is now the United States function as repositories of knowledge about plants' medicinal uses, it logically follows that continued use of those languages will assist with passing on knowledge about the medicinal value of plants native to the tribal nations' lands.

Choice A is incorrect because the text states that preserving Indigenous languages will increase the knowledge, not the number, of medicinal plants. Choice B is incorrect because the text is concerned with how vocabulary about the medicinal value of plants can be preserved through the continued daily use of Indigenous languages, not with how such vocabulary can be incorporated into globally dominant, non-Indigenous languages. Moreover, the text explains that the exclusive use of globally dominant languages in Indigenous communities comes at an expense to the continued daily use of those communities' languages. Given this relationship, it is unlikely globally dominant languages would borrow Indigenous vocabulary pertaining to plants' medicinal uses. Choice D is incorrect because the text doesn't discuss physical access to medicinal plants, instead focusing on Indigenous knowledge and language surrounding the medicinal uses of plants.

Question Difficulty: Hard

Question ID b00c53b3

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: b00c53b3

Henry Ossawa Tanner's 1893 painting *The Banjo Lesson*, which depicts an elderly man teaching a boy to play the banjo, is regarded as a landmark in the history of works by Black artists in the United States. Scholars should be cautious when ascribing political or ideological values to the painting, however: beliefs and assumptions that are commonly held now may have been unfamiliar to Tanner and his contemporaries, and vice versa. Scholars who forget this fact when discussing *The Banjo Lesson* therefore _____

Which choice most logically completes the text?

A. risk judging Tanner's painting by standards that may not be historically appropriate.

B. tend to conflate Tanner's political views with those of his contemporaries.

C. forgo analyzing Tanner's painting in favor of analyzing his political activity.

D. wrongly assume that Tanner's painting was intended as a critique of his fellow artists.

ID: b00c53b3 Answer

Correct Answer: A

Rationale

Choice A is the best answer. It most logically completes the text. The text argues that Tanner and his contemporaries may have been unfamiliar with modern beliefs and values. This suggests that scholars who attribute those modern values to Tanner's painting are risking judging the painting by standards that are not historically accurate.

Choice B is incorrect. It doesn't logically complete the text. The text argues that Tanner AND his contemporaries may have been unfamiliar with modern views. It never suggests that Tanner's views were different from his contemporaries' views. Choice C is incorrect. It doesn't logically complete the text. The text never suggests that scholars should analyze Tanner's political activity instead of his painting. Rather, the text argues that Tanner and his contemporaries may have been unfamiliar with modern beliefs and values. Choice D is incorrect. It doesn't logically complete the text. The text never suggests that Tanner wanted to critique his contemporaries with his painting. Rather, the text argues that Tanner AND his contemporaries may have been unfamiliar with modern beliefs and values.

Question Difficulty: Hard

Question ID adef6a92

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: adef6a92

Data collected by the Mars rover *Curiosity* at the Gale Crater's Murray Formation are suggestive of hydrological deposition of sediment in the distant past. To characterize the nature of the depositional environment, Frances Rivera-Hernández et al. analyzed the grain size of Murray Formation sediment, finding that although there are intervals of coarse grains, most of the sediment consists of fine grains that show signs of cracking due to episodic desiccation. Rivera-Hernández et al. concluded that the coarse grains are sandstone, which tends to be deposited by flowing water, whereas the fine grains are mudstone, which is slowly deposited by settling out of suspension in low-flow water, leading the researchers to posit that _____

Which choice most logically completes the text?

A. although the area of the Murray Formation experienced a prolonged period of dryness that prevented a lake from forming, water flowing from a distant source was present.

B. a lake existed at the Murray Formation for a prolonged period, though the lake occasionally experienced drying and there were periods in which one or more streams were present.

C. one or more streams existed at the Murray Formation for an extended period until being replaced by a lake that persisted for only a brief period before permanently drying.

D. a stream-fed lake was present at the Murray Formation for an extended period, and although the streams experienced occasional drying, the lake did not.

ID: adef6a92 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of the sediments found at the Gale Crater's Murray Formation on Mars. The text states that data gathered by the *Curiosity* rover suggest that bodies of water deposited sediment on Mars's surface long ago. The text goes on to say that studying the sediment, Rivera-Hernández et al. found some coarse grains they believe are sandstone, which tends to be left by flowing water, and many more fine grains they believe are mudstone, which tends to slowly sink in low-flow water. The text further indicates that the researchers noted cracks in the fine grains that suggest there were cycles of desiccation, or drying, at the site. Taken together, this information suggests that a lake (a body of low-flow water) existed at the site for a prolonged period but occasionally experienced drying and that there were periods in which one or more streams (flowing water) were present, since the extended existence of a lake would account for the abundance of fine grains, periods of drying would account for the cracks in the fine grains, and periods with streams would account for the sections of coarse grains.

Choice A is incorrect because the text indicates that an abundance of fine grains of sediment was found at the Murray Formation site, which suggests that a low-flow water source (such as a lake) *was* present. Further, the text makes no mention of where the water at the site may have originated from. Choice C is incorrect because the evidence described in the text doesn't support the idea that there were streams at the Murray Formation for an extended period and a lake for just a short time. The abundance of

fine grains suggests that a lake (a body of low-flow water) was present for an extended time, not just a short time, and the sections of coarse grains suggest that one or more streams (bodies of flowing water) were intermittently present while the lake existed, not at a separate time. Choice D is incorrect. Although the text suggests that both a low-flow body of water (such as a lake) and flowing water (such as streams) existed at the Murray Formation site, meaning that there could have been a stream-fed lake, the text explains that the fine grains that signify the presence of a lake exhibit cracking that indicates periods of desiccation, or drying, which suggests that a lake was present but *did* occasionally dry out.

Question Difficulty: Hard

Question ID 4e46cb15

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 4e46cb15

The *Mammillaria* cactus *M. boolii* occurs naturally only in the state of Sonora in Mexico, and the smallness of its range makes it especially vulnerable to extinction. The traditional single-species approach to conservation emphasizes the need to focus on individual species most at risk, like *M. boolii*, but recently, conservationists have argued that an ecosystem-based approach that incorporates the many interactions between the climate, terrain, and various species of a given geographical area may lead to better outcomes for all the species in a given location. If this view is correct, the single-species approach to the conservation of *M. boolii* could thus _____

Which choice most logically completes the text?

A. lead to a better understanding of how the distribution of *Mammillaria* species throughout Mexico has affected their survival.

B. allow conservationists to better consider how climatic changes affecting Sonora may reduce the number of species competing with *M. boolii*.

C. erroneously shift the focus of conservation efforts away from *M. boolii* itself.

D. fail to consider the ways in which the survival of *M. boolii* may be influenced by changes in the populations of other species that inhabit Sonora.

ID: 4e46cb15 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of conservation approaches for the *Mammillaria* cactus *M. boolii*. The text establishes that *M. boolii* only grows naturally in the state of Sonora in Mexico, which makes it particularly vulnerable to extinction. The text then contrasts two approaches to conservation: the traditional single-species approach that individually focuses on at-risk species and a newer ecosystem-based approach that considers the interactions between climate, terrain, and various species in a geographical area. According to the text, conservationists have recently argued that this ecosystem-based approach may lead to better outcomes for all species in a location. If this ecosystem view is correct, then the single-species approach to conserving *M. boolii* would likely fail to consider how the cactus's survival depends on its interactions with other species in Sonora's ecosystem.

Choice A is incorrect because the text doesn't address the distribution of *Mammillaria* species besides *M. boolii* throughout Mexico or discuss how that distribution affects survival. The text focuses specifically on *M. boolii* in Sonora and different approaches to its conservation. Choice B is incorrect because the text doesn't suggest that climatic changes in Sonora would reduce competition for *M. boolii* or that conservation efforts are focused on understanding this specific dynamic. In fact, the text implies that an ecosystem-based approach would consider climate among many other factors but doesn't specify how climatic changes might affect competition between species. Choice C is incorrect because the text doesn't suggest that the single-species approach would shift the focus of conservation efforts away from *M. boolii* itself—rather, it suggests that this approach

might be too narrowly focused on *M. boolii* alone without considering the broader ecosystem-related factors that affect its survival.

Question Difficulty: Hard

Question ID 52c1ff50

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 52c1ff50

Whistler waves are low-frequency plasma waves that on Earth are typically generated by lightning. Numerous recordings of whistler waves on Venus have led many scientists to suggest that the planet's atmosphere is host to extensive amounts of lightning, and, in fact, Venusian whistler waves have similar energy signatures to those of whistler waves generated by lightning on Earth. The majority of Venusian whistler wave data come from two spacecraft missions—the Pioneer Venus Orbiter (PVO) and the Venus Express (VEX)—which have included few observations of other phenomena consistent with lightning occurrences (such as flashes of light), leading other scientists to suggest that _____

Which choice most logically completes the text?

A. similarities in the energy signatures of Venusian and Earth whistler waves may reflect imprecisions in the PVO and VEX data.

B. the purported Venusian whistler waves must actually be some other type of atmospheric activity than whistler waves.

C. Venusian lightning has properties that make it unlikely to generate whistler waves.

D. there are geophysical characteristics of Venus not shared with Earth that promote the generation of whistler waves.

ID: 52c1ff50 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of whistler waves on Venus and the question of their origin. The text explains that whistler waves are plasma waves and that on Earth they are generated by lightning. The text goes on to state that numerous recordings of whistler waves on Venus have led many scientists to suggest Venus hosts lightning. However, the text goes on to explain that data from the PVO and VEX missions have included little evidence of the other phenomena that would be expected if lightning were occurring in Venus's atmosphere. Because there is a lack of additional evidence of lightning, it is reasonable to conclude that some scientists would be skeptical that lightning is the source of the whistler waves on Venus and would suggest unique geophysical characteristics of Venus as an alternative explanation for the waves' generation.

Choice A is incorrect because the text indicates that the other scientists are responding to the PVO and VEX data simply not showing additional evidence of lightning on Venus, not to flaws in the data. The text presents the similar energy signatures of Venusian and Earth whistler waves as an established observation and doesn't suggest the PVO and VEX data are imprecise. Choice B is incorrect because the text presents the similar energy signatures of Venusian and Earth whistler waves as an established observation. The text indicates that the other scientists are concerned with the lack of corroborating evidence of lightning on Venus, suggesting not that they doubt that the waves are whistler waves but rather that they doubt that the waves are generated by lightning. Choice C is incorrect because the text indicates that the other scientists are responding to the data providing little corroborating evidence of lightning on Venus. This suggests that instead of making a suggestion about properties of Venusian lightning, the other scientists likely would suggest that there may not even be lightning on Venus.

Question Difficulty: Hard

Question ID 9ebf76fb

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 9ebf76fb

In classical Greek and Roman mythology, female characters are typically cast as either villains lacking in psychological depth or passive victims who are marginal to these stories, which usually focus on the exploits of male characters. Recently, a subgenre has emerged in which writers reimagine these stories from the perspectives of their female characters, giving them agency and complex motivations. Purists argue that such efforts represent a distinctively modern tendency to impose our own values on past civilizations, obscuring those civilizations' beliefs. Defenders of the subgenre counter that reimaginings of the myths for new cultural contexts are almost as old as the myths themselves, suggesting that _____

Which choice most logically completes the text?

A. bringing female perspectives to the forefront is not indicative of a novel attitude regarding fidelity to Greek and Roman myths' ideologies.

B. modern writers' foregrounding of female characters is chiefly motivated by a desire to counterbalance the primacy of male perspectives among earlier adaptations of Greek and Roman myths.

C. purists are overlooking a long tradition of adapting Greek and Roman myths to focus on female characters.

D. the complex motivations given to female characters in modern retellings of Greek and Roman myths reflect a recent shift toward psychological depth in fictional representation.

ID: 9ebf76fb Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of a literary subgenre that reimagines Greek and Roman myths in a more modern cultural context—namely, the greater visibility and psychological depth of female characters. According to the text, purists object that this subgenre imposes modern values on past civilizations, while the subgenre's defenders argue that reimagining old myths for new cultural contexts is "almost as old as the myths themselves." If this argument in defense of the subgenre is accurate, then bringing female perspectives to the forefront of myth is reflective of a long-established attitude regarding writers' freedom to recontextualize the ideologies of Greek and Roman myths instead of remaining absolutely faithful to them.

Choice B is incorrect because the text suggests that modern writers who foreground female characters in their adaptations of Greek and Roman myths are motivated by a desire to counterbalance the primacy of male perspectives in the myths themselves, not in earlier adaptations of those myths. The text doesn't indicate that the modern writers are responding to earlier adaptations and only discusses those adaptations in the context of the argument that recontextualizing Greek and Roman myths is a very old practice. Choice C is incorrect because the defenders' claim concerns the general practice of reimagining myths for new cultural contexts, not specifically a tradition of focusing on female characters. The text doesn't indicate that earlier reimaginings centered on female characters, so it wouldn't be logical to conclude that purists are overlooking a long tradition of adapting myths to focus on female characters specifically. Choice D is incorrect. While the text supports the claim that the modern retellings of Greek and

Roman myths have given complex motivations to the female characters, it doesn't associate this development with a trend toward the portrayal of greater psychological depth in fiction more broadly or claim that such a trend exists. Moreover, the claim that there is an association wouldn't follow logically from the last sentence of the text, which asserts that reimagining myths in new cultural contexts is an established practice.

Question Difficulty: Hard

Question ID b95037a7

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: b95037a7

Birds of many species ingest foods containing carotenoids, pigmented molecules that are converted into feather coloration. Coloration tends to be especially saturated in male birds' feathers, and because carotenoids also confer health benefits, the deeply saturated colors generally serve to communicate what is known as an honest signal of a bird's overall fitness to potential mates. However, ornithologist Allison J. Shultz and others have found that males in several species of the tanager genus *Ramphocelus* use microstructures in their feathers to manipulate light, creating the appearance of deeper saturation without the birds necessarily having to maintain a carotenoid-rich diet. These findings suggest that _____

Which choice most logically completes the text?

A. individual male tanagers can engage in honest signaling without relying on carotenoid consumption.

B. feather microstructures may be less effective than deeply saturated feathers for signaling overall fitness.

C. scientists have yet to determine why tanagers have a preference for mates with colorful appearances.

D. a male tanager's appearance may function as a dishonest signal of the individual's overall fitness.

ID: b95037a7 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of Shultz's finding about male tanagers. The text explains that because carotenoids both contribute to deeply saturated feathers and offer health benefits, having deeply saturated feathers is usually "an honest signal" (a true indication) that a bird is generally fit. However, Shultz and others have found that certain male tanagers can appear to have deeply saturated feathers even if they haven't consumed a diet rich in carotenoids, thanks to microstructures in their feathers that manipulate light. If those birds aren't necessarily eating carotenoid-rich diets, they may actually be less fit than other birds that appear to have similarly saturated feathers; this suggests that a male tanager's appearance may function as a dishonest signal, or a false indication, of the bird's overall fitness.

Choice A is incorrect because Shultz's finding suggests that some tanagers can signal fitness without consuming the carotenoids that contribute to fitness, thereby making those signals dishonest, not that tanagers can give honest signals of their fitness without consuming carotenoids. Choice B is incorrect because Shultz's finding suggests that the microstructures in certain tanagers' feathers can give a dishonest signal of fitness, not that the microstructures are less effective than actual pigmentation for signaling fitness. Whether the signal of fitness is honest or dishonest has no bearing on how effective the signal is: a signal is effective if potential mates behave as though it's true, regardless of whether it's actually true. Since there's no information in the text about how potential mates respond to the dishonest signals of some tanagers, there's no support for the idea that the dishonest signals are less effective than the honest signals. Choice C is incorrect because Shultz's finding suggests that certain male tanagers may appear to be fitter than they actually are, not that scientists haven't determined why tanagers prefer mates with colorful appearances.

Question Difficulty: Hard

Question ID 751c1b9f

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 751c1b9f

Across brown bears—omnivores with high dietary plasticity—there is wide variety in dietary mix, which may reflect genetics, local resource availability, or social learning (cubs stay with their mothers for two years or more). Evaluating these possibilities, Anne Hertel et al. analyzed 30 years of data on trophic position (indicative of dietary mix) for female brown bears. After separation, daughters, who tended to settle near their mothers, occupied the same trophic positions as their mothers for two years, but the correlation disappeared by year five. Trophic correlation with unrelated individuals in similar habitats was modest, while habitat-independent correlation with nonmaternal relatives (e.g., cousins) was no different than with unrelated individuals. These findings suggest that _____

Which choice most logically completes the text?

A. growing dissimilarity between mothers and their daughters with regard to dietary mix may reflect changes in the resources available in maternal habitats, though social learning could also contribute to the trend.

B. dietary mix among females may reflect a social learning effect that eventually diminishes, though environmental constraints cannot be ruled out as a contributing factor.

C. female dietary mix is best understood as changeable and contingent on fluctuating environmental conditions rather than as the result of social learning or genetic factors.

D. social learning and resource fluctuations may both play a role in dietary mix among females, at least temporarily, though genetic factors appear to make a significant contribution as well.

ID: 751c1b9f Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of Hertel et al.'s study of dietary mix variation among female brown bears. According to the text, the researchers evaluated genetics, local resource availability, and social learning as factors in female brown bears' trophic position, or position in the food web. According to the text, daughters tended to settle near their mothers after separating and held the same trophic positions as the mothers for two years, but no longer did by the fifth year—a temporary similarity that may reflect a socially learned behavior that faded over time after separation. Additionally, the text states that the degree of similarity in trophic position between nonmaternal relatives (e.g., cousins) was the same as that between unrelated individuals, suggesting that genetics don't significantly influence dietary mix, and the text also states that there was modest similarity in the trophic positions of unrelated individuals in similar habitats, suggesting that environmental conditions (which would include resource availability) may have some influence on dietary mix. Taken together, the findings suggest that while environmental constraints can't be ruled out as a contributing factor, dietary mix among female brown bears may reflect a social learning effect that eventually diminishes.

Choice A is incorrect because the text notes that daughters tended to settle near their mothers after separating—that is, that they often didn't leave the maternal habitat. Therefore, changes in resource availability in the mothers' habitats would likely have

affected the daughters similarly instead of causing their dietary mix to differ from that of their mothers. Further, the form of social learning addressed by the text is that between mothers and daughters; although the daughters no longer held the same trophic position as their mothers five years after separating from them, the text doesn't address the possibility that the daughters' divergence from the dietary behaviors of their mothers is the result of learning from other bears or suggest that the daughters even interacted with other adult bears in a substantive way. Choice C is incorrect. Instead of suggesting that environmental conditions are the most important factor in dietary mix variation and that social learning isn't a factor, the findings discussed in the text suggest that environmental conditions may have some effect (since there was modest similarity in dietary mix between unrelated bears in similar habitats, or similar environmental conditions) and that social learning may be a factor (since daughters held the same trophic positions as their mothers for two years after separating but not for five years, which may reflect daughters maintaining dietary behaviors they learned from their mothers but changing their behaviors over time). Choice D is incorrect because the findings presented in the text argue against, not for, genetics as a significant factor in variation in dietary mix. The text indicates that independent of their habitats, the degree of similarity in dietary mix between nonmaternal relatives, like cousins, was the same as that between unrelated individuals. This means that genetic relatedness didn't have a detectable effect on dietary mix independent of shared habitat.

Question Difficulty: Hard

Question ID 1d589436

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 1d589436

While mammals collectively exhibit the highest ratio of brain size to body size among vertebrates, a team led by paleontologist Ornella Bertrand demonstrates that for ten million years following the extinction of dinosaurs, that ratio in fact shrank for mammals as they evolved to fill newly vacated ecological niches and their bodies increased in size more rapidly than their brains. Competition for resources tends to favor intelligence and thus large, complex brains, but during this period, the abundance of resources relative to mammalian population numbers likely moderated competition and facilitated an increase in body size. Bertrand and her team reason that as population numbers swelled, competition intensified, creating conditions that _____

Which choice most logically completes the text?

A. heightened the advantage that large body size conferred on mammals in certain ecological niches.

B. restricted resources so drastically that mammals struggled to secure enough food to maintain large brain sizes.

C. favored an evolutionary increase in brain size relative to body size among mammals.

D. encouraged mammals with large brain sizes to adapt to a range of ecological niches.

ID: 1d589436 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of the evolution of mammalian brain-to-body size ratios. As the text explains, mammals evolved to fill ecological niches left vacant by the dinosaurs' extinction, and for the next ten million years, brain-to-body size ratios among mammals shrank as their bodies grew more rapidly than their brains. This decline was a natural outcome of resource abundance since increased competition for resources tends to favor intelligence and large brains, while decreased competition conversely favors large body size. Later, mammalian population sizes "swelled," resulting in intensified competition—that is, a decrease in the abundance of resources relative to population sizes. Given the relationship established between resource availability and the ratio of brain size to body size, it can be inferred that around ten million years after the dinosaurs' extinction, ecological conditions favored an evolutionary increase in brain size relative to body size among mammals—a reversal of the previous trend.

Choice A is incorrect because, as the text explains, competition for resources tends to favor intelligence and large brains, not large body size. Thus, when mammalian population sizes swelled and competition among mammals intensified, the result would have been a decrease, not an increase, in the advantage that large body size conferred on mammals in certain ecological niches. Choice B is incorrect because the text frames competition for resources as a selective pressure favoring intelligence and brain size relative to body size. Thus, even if competition among mammals resulted in resource deprivation, these conditions would have favored adaptation toward larger brain-to-body size and consequently greater intelligence to compete more effectively for decreased resources. Choice D is incorrect. The period when mammals adapted to a range of ecological niches that is under discussion in the text is the ten million years immediately following the dinosaurs' extinction, when competition for resources was low. Moreover, the text explains that increased competition tends to favor brain size, while decreased competition tends to favor

body size. Thus, when competition increased, the logical outcome would have been an increase in brain size relative to body size among mammals, not a dispersal of large-brained mammals into new ecological niches, which the text states had already occurred under the very different conditions of low competition.

Question Difficulty: Hard

Question ID d6af24b7

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: d6af24b7

Outi Tervo and team studied the effect of human-caused noise on narwhals (*Monodon monoceros*), arctic marine mammals that are sensitive to acoustic changes in their environment. Hypothesizing that elevated sound levels affect foraging among narwhals, Tervo's team compared narwhal diving behaviors in natural sound conditions with those behaviors in two human-caused sound exposure conditions—ship sounds and ship sounds coupled with sonic pulses. Both exposure conditions resulted in significant decreases in the number and target depth of deep dives (associated with foraging) relative to natural conditions. However, differences between diving behaviors in the two exposure types were negligible, a finding that could be attributed to the fact that _____

Which choice most logically completes the text?

A. sonic pulses can be heard at significantly greater ocean depths than ship sounds can.

B. ship sounds contribute so much to the overall sound level that the addition of sonic pulses has little effect on the narwhals' auditory environment.

C. narwhals forage at shallower depths in the presence of ship sounds alone than in the presence of ship sounds coupled with sonic pulses.

D. the narwhals weren't as sensitive to human-caused sounds as the researchers had predicted.

ID: d6af24b7 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of human-caused noise and narwhal behavior. The text establishes that Outi Tervo and team found that while both ship sounds alone and ship sounds coupled with sonic pulses significantly affected narwhal foraging behaviors compared to natural conditions, there were negligible differences between the narwhals' responses to the two sound exposure types (a somewhat surprising finding because one might expect that adding sonic pulses would have an even greater impact). It logically follows that if ship sounds are already so loud that adding sonic pulses to them doesn't substantially increase the level of human-caused sound exposure, the two conditions would produce essentially the same behavioral responses because the additional sonic pulses are essentially irrelevant.

Choice A is incorrect because the fact that sonic pulses are audible at greater depths than are ship sounds would be more likely to help explain a difference—not a similarity—in how the narwhals responded to the two types of sound exposure. If at some points during the study the narwhals were at depths where only sonic pulses (but not ship sounds) could be heard, then they might be expected to alter their diving behavior more dramatically in response to those pulses. But since the text reports negligible differences between diving behaviors in the two exposure types, the fact that sonic pulses reach greater depths than do ship sounds has little explanatory power in this context. Choice C is incorrect because the idea that the narwhals foraged at shallower depths in one of the two exposure conditions directly contradicts the information given in the text. The text states that there were negligible differences in the narwhals' diving behaviors between the two conditions, meaning that the behaviors were

essentially the same. Choice D is incorrect. Although the text states that two conditions with human-caused sounds (ship sounds alone and ship sounds coupled with sonic pulses) had essentially the same effect on narwhals' deep dives, this indicates only that sonic pulses didn't meaningfully change the effect of ship sounds, not that the narwhals were less sensitive to human-caused sounds than predicted. Indeed, the text makes it clear that the sounds significantly altered the narwhals' behavior.

Question Difficulty: Hard

Question ID 618de889

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 618de889

The ratio of methane to other atmospheric constituents—represented by a measure called the methane mole fraction—influences a variety of meteorological phenomena, notably precipitation and humidity. For Titan, Saturn's largest moon, the observational data that exist are too sparse and discrepant to fully constrain the range of the methane mole fraction at various atmospheric levels. Juan Lora and colleagues point out that outputs of the IPSL atmospheric model of Titan, which track closely to observations in some respects, reflect how the model's developers responded to this challenge: by prescribing a uniform methane mole fraction for the lowest level of the atmosphere. It is therefore important to note that _____

Which choice most logically completes the text?

A. some disagreements between the model's simulations of Titan's precipitation and humidity and the moon's actual precipitation and humidity are to be expected.

B. further observations of Titan may clarify the moon's methane mole fraction sufficiently for the model to employ a single value rather than a range.

C. even though the model's outputs sometimes agree with observational data, Titan's real methane mole fraction is likely higher than the methane mole fraction used in the model.

D. inconsistencies across the model's simulations of Titan's precipitation and humidity could be attributable to variations in the moon's methane mole fraction.

ID: 618de889 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of modeling the atmosphere of Titan. The text establishes that the methane mole fraction (the ratio of methane to other atmospheric components) influences precipitation, humidity, and other meteorological phenomena and that observational data for Titan are too lacking ("too sparse and discrepant") to fully determine the range of this measure across the moon's various atmospheric levels. The text indicates that because of this limitation, researchers developed an atmospheric model (IPSL) that uses a simplified approach: it applies a uniform methane mole fraction for the lowest atmospheric level. Since it is very unlikely that the actual methane distribution across atmospheric levels on Titan is uniform, and since the methane mole fraction directly affects precipitation and humidity, it logically follows that the model's simplified treatment of the methane mole fraction would lead to some disagreements between the model's simulations and Titan's actual precipitation and humidity.

Choice B is incorrect because the text makes it clear that the model *already* uses a single value for Titan's methane mole fraction instead of a range. Further, the text suggests that the single value is a simplification of what is likely a more complex reality, so there's no reason to assume that a single value would be more desirable than a range. Choice C is incorrect. The text strongly suggests that Titan's actual methane mole fraction differs from the uniform value used in the model, even though some of the model's outputs align closely with observations, but nothing in the text indicates how the actual value would differ. There's no

reason to assume that the actual methane mole fraction is higher than what the model uses. The “lowest level” mentioned in the text refers to the atmosphere and not Titan’s methane mole fraction. Choice D is incorrect because the text makes it clear that the model *doesn’t* reflect the actual variations in the methane mole fraction across Titan’s atmospheric levels, since observational data are too limited. Because the model uniformly applies a set methane mole fraction, no inconsistencies in the simulations would be attributable to actual variations in the moon’s methane mole fraction.

Question Difficulty: Hard

Question ID c087f68d

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: c087f68d

The morphological novelty of echinoderms—marine invertebrates with radial symmetry, usually starlike, around a central point—impedes comparisons with most other animals, in which bilateral symmetry on an anterior-posterior (head to tail) axis through a trunk is typical. Particularly puzzling are sea stars, thought to have evolved a headless layout from a known bilateral origin. Applying genomic knowledge of *Saccoglossus kowalevskii* acorn worms (close relatives of sea stars, and thus expected to have similar markers for corresponding anatomical regions) to the body patterning genes of *Patiria miniata* sea stars, Laurent Formery et al. observed activity only in anterior genes across *P. miniata*'s entire body and some posterior genes limited to the edges, suggesting that _____

Which choice most logically completes the text?

A. despite the greater prevalence of anterior genes in sea stars' genetic makeup, posterior genes active at the body's perimeter are primarily responsible for the starlike layout that distinguishes sea stars' radial symmetry from that of other echinoderms.

B. contrary to the belief that they evolved from early ancestors with the bilateral form typical of many other animals, sea stars instead originated with an atypical body layout that was neither bilaterally nor radially symmetrical.

C. although the two species are closely related, there is only minimal correspondence in the genetic markers for head, tail, and trunk region development in *P. miniata* sea stars and *S. kowalevskii* acorn worms.

D. rather than undergoing changes resulting in the eventual elimination of a head region in their radial body plan, as previously assumed, sea stars' morphology evolved to completely lack a trunk and consist primarily of a head region.

ID: c087f68d Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of the morphology (form and structure) of sea stars, a type of echinoderm. The text indicates that echinoderms have radially symmetrical body plans (symmetrical around a central point, usually in the form of a star), whereas most animals have bilaterally symmetrical body plans (symmetrical along an axis running from head to tail through a trunk). According to the text, sea stars are unusual echinoderms because, despite their radial body plan, they descended from known bilateral ancestors. This shift in body plan was thought to be a process of losing the genetic markers associated with the head region. The text explains that by comparing the genes of one sea star species (*P. miniata*) to those of a close relative, the acorn worm, researchers determined that instead, anterior (head) genes are active across the sea star's entire body, posterior (tail) genes are active in limited, peripheral locations of the body, and no trunk-related genes are active. This finding strongly suggests that, rather than becoming "headless" as they evolved from a bilateral ancestor, sea stars developed a body plan consisting almost entirely of a head region with a minimal tail region and no trunk region present.

Choice A is incorrect because the text doesn't identify how any particular region of sea stars' bodies influences the layout of sea stars' radial symmetry. Moreover, the text indicates that the radial symmetry of echinoderms is "usually starlike," not that a starlike layout distinguishes sea stars from other echinoderms. Choice B is incorrect because the text doesn't suggest that the idea that

sea stars evolved from an ancestor with bilateral symmetry is incorrect (describing the bilateral origin as "known") and doesn't address any body plans other than those with radial or bilateral symmetry. The text strongly suggests that rather than revealing something about sea stars' origin, Formery et al.'s findings contradict the assumption that the current body plan of sea stars is "headless." Choice C is incorrect because the text suggests that Formery et al. were able to make determinations about *P. miniata* sea stars' body plan based on the comparability of genetic markers between *P. miniata* and *S. kowalevskii* acorn worms. The text indicates only that little or no activity was observed in certain types of genes associated with body development in *P. miniata*, not that those genes turned out to largely differ from body-development genes in *S. kowalevskii*.

Question Difficulty: Hard

Question ID 6829661c

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 6829661c

Among social animals that care for their young, such as chickens, macaque monkeys, and humans, newborns appear to show an innate attraction to faces and face-like stimuli. Elisabetta Versace and her colleagues used an image of three black dots arranged in the shape of eyes and a nose or mouth to test whether this trait also occurs in *Testudo* tortoises, which live alone and do not engage in parental care. They found that tortoise hatchlings showed a significant preference for the image, suggesting that _____

Which choice most logically completes the text?

A. face-like stimuli are likely perceived as harmless by newborns of social species that practice parental care but as threatening by newborns of solitary species without parental care.

B. researchers should not assume that an innate attraction to face-like stimuli is necessarily an adaptation related to social interaction or parental care.

C. researchers can assume that the attraction to face-like stimuli that is seen in social species that practice parental care is learned rather than innate.

D. newly hatched *Testudo* tortoises show a stronger preference for face-like stimuli than adult *Testudo* tortoises do.

ID: 6829661c Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents the conclusion that most logically follows from the text's discussion of the study by Versace and colleagues. The text indicates that newborn animals of some species are attracted to faces and to stimuli that resemble faces. These species, the text says, share two characteristics: they're social and they practice parental care, meaning that parents care for their young. The text goes on to describe Versace and colleagues' experiment, which showed that *Testudo* tortoises, which aren't social and don't practice parental care, were attracted to a stimulus that resembles a face. Since Versace and colleagues have shown that a species that isn't social and doesn't practice parental care nevertheless has the innate characteristic of being attracted to face-like stimuli, it follows that this characteristic shouldn't be assumed to be an adaptation related to social interaction or parental care.

Choice A is incorrect because the text indicates that the tortoise hatchlings, which are solitary and don't practice parental care, were attracted to the face-like stimuli, not that they perceived the stimuli as threatening. Choice C is incorrect because the phenomenon discussed in the text is an attraction to faces and face-like stimuli on the part of newborn animals, which can't show any learned characteristics since they were just born. Additionally, the text tells us that the tortoises Versace and colleagues studied aren't social and don't practice parental care, so any findings about those tortoises wouldn't be relevant to the question of whether an attraction to faces in social species that practice parental care is innate or learned. Choice D is incorrect because the text gives no indication that adult tortoises were tested on face-like stimuli and, if adults were in fact tested, no information about how they responded is provided. Since no information about adult tortoises' responses is provided, no conclusion comparing those responses to the responses of newly hatched tortoises can be supported.

Question Difficulty: Hard

Question ID 0e48e4cb

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 0e48e4cb

Some ethicists hold that the moral goodness of an individual's actions depends solely on whether the actions themselves are good, irrespective of the context in which they are carried out. Philosopher L. Sebastian Purcell has shown that surviving works of Aztec (Nahua) philosophy express a very different view. Purcell reveals that these works posit an ethical system in which an individual's actions are judged in light of how well they accord with the individual's role in society and how well they contribute to the community. To the extent that these works are representative of Aztec thought, Purcell's analysis suggests that _____

Which choice most logically completes the text?

A. the Aztecs would have disputed the idea that the morality of an individual's actions can be assessed by appealing to standards of behavior that are independent of the individual's social circumstances.

B. the Aztecs would not have accepted the notion that the morality of an individual's actions can be fairly evaluated by people who do not live in the same society as that individual.

C. actions by members of Aztec society who contributed a great deal to their community could be judged as morally good even if those actions were inconsistent with behaviors the Aztecs regarded as good in all contexts.

D. similar actions performed by people in different social roles in Aztec society would have been regarded as morally equivalent unless those actions led to different outcomes for the community.

ID: 0e48e4cb Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion about Aztec (Nahua) ethics. The text indicates that, according to Purcell's interpretation of available Aztec philosophical works, the Aztec ethical system views an individual's actions in relation to that individual's societal role and how the actions affect the community. The text contrasts this view with another held by some ethicists, namely that actions are morally good or bad regardless of the context in which they occur. Thus, Purcell's analysis suggests that the Aztecs would have asserted that the morality of an individual's actions are rooted in that person's position in the community and the actions' effects and therefore cannot be determined in the absence of that context.

Choice B is incorrect. Although the text indicates that morally judging an action according to Aztec ethics requires an understanding of the action's effects and the individual's social circumstances, it does not specify that only members of that society can acquire this information. Choice C is incorrect because it implies that the Aztecs considered some actions good or bad regardless of the surrounding context, which contradicts the text's claim that the Aztecs believed that the morality of an individual's action is dependent on the action's effects on the community and the person's specific circumstances. Choice D is incorrect. Although the text indicates that in Aztec ethics the morality of an action depends in part on how it affects the community, this is only one of the two factors—the other being the person's societal role—that need to be considered. Therefore, it

is possible that two actions with the same effect on the community could be considered morally distinct if they are performed by individuals in different social roles.

Question Difficulty: Hard

Question ID f396849d

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: f396849d

During their larval phase, numerous species of coral reef fish are drawn toward areas where light is present. To better understand how artificial light at night (ALAN) might affect some coral reef fish, researchers explored the effect of exposure to low levels of ALAN on the reproductive success of the common clownfish (*Amphiprion ocellaris*). While exposure to low levels of ALAN had no significant effect on spawning frequency and egg fertilization in *A. ocellaris*, incubation in the presence of ALAN completely inhibited hatching. These findings suggest that _____

Which choice most logically completes the text?

A. *A. ocellaris* that settle in areas with low levels of ALAN have significantly higher rates of successful egg fertilization than *A. ocellaris* that settle in areas without ALAN do.

B. the reproductive success of *A. ocellaris* would be at risk if they were to selectively settle in regions that are regularly exposed to low levels of ALAN.

C. the reproductive success of *A. ocellaris* is more greatly affected by the presence of low levels of ALAN during incubation than the reproductive success of other species of coral reef fish is.

D. the spawning frequency of *A. ocellaris* was more strongly affected by the presence of low levels of ALAN than egg fertilization was, though both were less affected than incubation.

ID: f396849d Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of artificial light at night (ALAN) and the common clownfish (*A. ocellaris*). The text indicates that researchers found that when *A. ocellaris* is exposed to low levels of ALAN, spawning frequency and egg fertilization aren't significantly affected but hatching is completely inhibited—that is, the eggs never hatch. Therefore, if *A. ocellaris* were to settle only in regions where the fish would be regularly exposed to low levels of ALAN, their eggs would stop hatching and their reproductive success would be at risk.

Choice A is incorrect because the text indicates that exposure to low levels of ALAN had no significant effect on egg fertilization for *A. ocellaris*, so there's no reason to expect there would be any significant difference in rates of successful egg fertilization between areas with low levels of ALAN and areas without ALAN. Choice C is incorrect because the text doesn't discuss the particular effects of low levels of ALAN on any species of coral reef fish besides *A. ocellaris*. For this reason, there's no support in the text for the idea that the reproductive success of *A. ocellaris* is more greatly affected by the presence of low levels of ALAN than the reproductive success of other species of coral reef fish is. Choice D is incorrect. The text does indicate that *A. ocellaris* incubation was most strongly affected by low levels of ALAN, but it doesn't indicate that there was a greater effect on spawning frequency than on egg fertilization; in fact, the text states that there was no significant effect on either.

Question Difficulty: Hard

Question ID 01d4dfd9

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 01d4dfd9

Marta Coll and colleagues' 2010 Mediterranean Sea biodiversity census reported approximately 17,000 species, nearly double the number reported in Carlo Bianchi and Carla Morri's 2000 census—a difference only partly attributable to the description of new invertebrate species in the interim. Another factor is that the morphological variability of microorganisms is poorly understood compared to that of vertebrates, invertebrates, plants, and algae, creating uncertainty about how to evaluate microorganisms as species. Researchers' decisions on such matters therefore can be highly consequential. Indeed, the two censuses reported similar counts of vertebrate, plant, and algal species, suggesting that _____

Which choice most logically completes the text?

A. Coll and colleagues reported a much higher number of species than Bianchi and Morri did largely due to the inclusion of invertebrate species that had not been described at the time of Bianchi and Morri's census.

B. some differences observed in microorganisms may have been treated as variations within species by Bianchi and Morri but treated as indicative of distinct species by Coll and colleagues.

C. Bianchi and Morri may have been less sensitive to the degree of morphological variation displayed within a typical species of microorganism than Coll and colleagues were.

D. the absence of clarity regarding how to differentiate among species of microorganisms may have resulted in Coll and colleagues underestimating the number of microorganism species.

ID: 01d4dfd9 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents the conclusion that most logically completes the text's discussion of the different counts of species in the Mediterranean Sea. The text states that Coll and colleagues reported almost double the number of species that Bianchi and Morri reported in their study ten years earlier. According to the text, this difference can only be partly attributed to new invertebrate species being described in the years between the two studies, which means there must be an additional factor that made Coll and colleagues' count so much higher than Bianchi and Morri's count. The text goes on to explain that factor: researchers have a relatively poor understanding of microorganisms' morphological variability, or the differences in microorganisms' structure and form. This poor understanding makes it hard to classify microorganisms by species and means that researchers' decisions about classifying microorganisms can have a large effect on the overall species counts that researchers report. Additionally, the text says that the two censuses reported similar numbers of vertebrate, plant, and algal species, which means that the difference in overall species did not come from differences in those categories. Given all this information, it most logically follows that Coll and colleagues may have treated some of the differences among microorganisms as indicative of the microorganisms being different species, whereas Bianchi and Morri treated those differences as variations within species, resulting in Coll and colleagues reporting many more species than Bianchi and Morri did.

Choice A is incorrect because the text explicitly addresses this issue by stating that the description of new invertebrate species in the years between the two studies can explain only part of the difference in the number of species reported by the studies. The focus of the text is on explaining the difference between Coll and colleagues' count and Bianchi and Morri's count that cannot be accounted for by the inclusion of invertebrate species that had not been described at the time of Bianchi and Morri's study. Choice C is incorrect because nothing in the text suggests that Bianchi and Morri may have been less sensitive to how much the form and structure of microorganisms vary within the same species than Coll and colleagues were. If Bianchi and Morri had been less sensitive to within-species variation than Coll and colleagues were, Bianchi and Morri would likely have reported more species than Coll and colleagues did, since less sensitivity to within-species variation would lead researchers to classify as different species microorganisms that more sensitive researchers would classify as variations within the same species. The text indicates, however, that Bianchi and Morri reported far fewer species than Coll and colleagues did; since the text also excludes other explanations for this difference, it suggests that in fact Bianchi and Morri were more sensitive to within-species variation than Coll and colleagues were, leading Bianchi and Morri to report fewer overall species. Choice D is incorrect because the text is focused on explaining why Coll and colleagues reported many more species than Bianchi and Morri did, and an underestimate of the number of microorganism species by Coll and colleagues would not explain that difference—it would suggest, in fact, that the difference in the number of species should have been even larger.

Question Difficulty: Hard

Question ID 21cdd49b

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 21cdd49b

Conventional theories of rhetoric hold that presenting information as coming from credentialed experts increases that information's credibility. When communications researcher Sungkyoung Lee and her colleagues tested messages seeking volunteers for clinical trials, however, they found that participants in their study judged recruitment messages from former trial volunteers as significantly more credible than messages from doctors (i.e., credentialed experts). One reason for this may be that the doctors' status as credentialed experts wasn't ignored but rather was outweighed by participants' views of the experiential relevance of the two types of messengers; that is, participants may have reacted the way they did because _____

Which choice most logically completes the text?

A. messages from former trial volunteers depicted clinical trials as being more positive experiences than did messages from doctors.

B. participants did not have enough experience to evaluate the credibility of the doctors' messages but did have enough experience to evaluate the credibility of former trial volunteers' messages.

C. the fact that former trial volunteers went through the same experience that participants were contemplating while doctors did not was more important to participants than the doctors' status as credentialed experts was.

D. participants regarded the experiences of both the doctors and former trial volunteers as relevant to the subject of clinical trials but were skeptical of the doctors' status as credentialed experts.

ID: 21cdd49b Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents the conclusion that most logically follows from the text's discussion of how participants considered messages from former trial volunteers and doctors. The text first establishes that information coming from credentialed experts typically increases the credibility of that information. However, the text goes on to describe a situation that goes against this expectation: the messages from previous trial volunteers were judged as more credible than the messages from licensed doctors when recruiting clinic trial participants. The text then goes on to speculate as to why this may have been the case, stating that participants likely considered the messages from the former trial volunteers to be more convincing than the messages from the doctors because the former trial volunteers were perceived as having undergone the same experience that the participants were considering. It is reasonable to infer, then, that participants regarded the former trial volunteers' direct experience as more important to their decision-making than the doctors' status as credentialed experts.

Choice A is incorrect because the text does not provide any indication as to the content or the tone of the messages provided by either the doctors or the former trial volunteers regarding the clinical trials. Choice B is incorrect. Since the study participants had not themselves participated in the clinical trial, they could not rely on their experience to evaluate the credibility of either the former trial volunteers or the doctors. Choice D is incorrect. While the text does establish that the participants likely considered the messages from both the doctors and the former trial volunteers, it does not suggest that the participants doubted the doctors'

credentials. Rather, the text speculates that participants may have given the experiences of the former trial volunteers more importance than the doctors' credentials when considering the recruitment messages.

Question Difficulty: Hard

Question ID e18e4844

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: e18e4844

The increased integration of digital technologies throughout the process of book creation in the late 20th and early 21st centuries lowered the costs of book production, but those decreased costs have been most significant in the manufacturing and distribution process, which occurs after the authoring, editing, and design of the book are complete. This suggests that in the late 20th and early 21st centuries, _____

Which choice most logically completes the text?

A. digital technologies made it easier than it had been previously for authors to write very long works and get them published.

B. customers generally expected the cost of books to decline relative to the cost of other consumer goods.

C. publishers increased the variety of their offerings by printing more unique titles but also printed fewer copies of each title.

D. the costs of writing, editing, and designing a book were less affected by the technologies used than were the costs of manufacturing and distributing a book.

ID: e18e4844 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents the conclusion that most logically follows from the text's discussion of how digital technologies affected the process of book creation. The text explains that in the late 20th and early 21st centuries digital technologies lowered book production costs most significantly in manufacturing and distribution. The text goes on to point out that authoring, editing, and book design are distinct steps in the process that occur before manufacturing and distribution. Because the savings connected to digital technologies have been most significant in manufacturing and distribution, it's reasonable to infer that those technologies had less of an effect on writing, editing, and designing books.

Choice A is incorrect because the text focuses on lowered book production costs that occur after authoring has taken place; there's no indication in the text whether digital technologies made writing and publishing lengthy books easier. Choice B is incorrect. Although it's logical to conclude that customers would expect the cost of books to decline if production costs have declined, the text doesn't address customer expectations for the cost of books or any other consumer goods. Choice C is incorrect because the text focuses broadly on how digital technologies have affected the cost of the publishing process; it doesn't address the kinds of books being published or how many copies are printed.

Question Difficulty: Hard

Question ID af45dc3f

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: af45dc3f

Many animals, including humans, must sleep, and sleep is known to have a role in everything from healing injuries to encoding information in long-term memory. But some scientists claim that, from an evolutionary standpoint, deep sleep for hours at a time leaves an animal so vulnerable that the known benefits of sleeping seem insufficient to explain why it became so widespread in the animal kingdom. These scientists therefore imply that _____

Which choice most logically completes the text?

A. prolonged deep sleep is likely advantageous in ways that have yet to be discovered.

B. most traits perform functions that are hard to understand from an evolutionary standpoint.

C. it is more important to understand how widespread prolonged deep sleep is than to understand its function.

D. many traits that provide significant benefits for an animal also likely pose risks to that animal.

ID: af45dc3f Answer

Correct Answer: A

Rationale

Choice A is the best answer. It most logically completes the text. The text says that some scientists can't explain why prolonged deep sleep is so widespread, given that the known benefits of sleep don't seem to make up for how vulnerable it leaves an animal. This suggests that prolonged deep sleep probably has unknown evolutionary benefits that make up for the vulnerability.

Choice B is incorrect. It doesn't logically complete the text. The text only discusses the benefits and risks of one trait: sleep. So there's no basis for an inference about "most traits." Choice C is incorrect. It doesn't logically complete the text. The text says that it is already known that prolonged deep sleep is widespread in the animal kingdom. Rather, what some scientists can't explain is WHY prolonged deep sleep is so widespread, given that the known benefits of sleep don't seem to make up for how vulnerable it leaves an animal. Choice D is incorrect. It doesn't logically complete the text. The text only discusses the benefits and risks of one trait: sleep. So there's no basis for an inference about "many traits."

Question Difficulty: Hard

Question ID 44a7fb0e

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 44a7fb0e

With the ongoing expansion of e-commerce, consumers are expecting faster and faster delivery of goods, but delivery companies continue to struggle with last-mile logistics (the final step in delivery to consumers) due to challenges such as complex and inefficient delivery routes. Innovations to mitigate these challenges have been emerging—the use of aerial drones, for example—but these innovations tend to engender their own complications (e.g., regulations on the use of drones in residential airspace), leading researchers to conclude that _____

Which choice most logically completes the text?

A. consumers' expectations for reduced delivery times may be outstripping what is viable for delivery companies to provide.

B. a better understanding of consumers' expectations for delivery is needed so that companies can better plan for fluctuations in delivery volume.

C. rapid delivery is a leading factor in consumer satisfaction, and therefore delivery companies would benefit from investing resources in reducing delivery times.

D. there may not be sufficient incentive for delivery companies to attempt to solve the problems associated with last-mile logistics.

ID: 44a7fb0e Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of consumer expectations and the struggles delivery companies face. The text states that while consumers expect ever-faster delivery of goods, delivery companies "continue to struggle with last-mile logistics." The text further explains that innovations aimed at addressing this challenge have a tendency to cause complications of their own. Because escalating consumer demands for speed are paired with persistent, complex delivery obstacles and new problems arising from attempted solutions, it logically follows that consumer expectations for delivery times may be exceeding what companies can feasibly provide.

Choice B is incorrect because the text doesn't address the idea of delivery volumes at all and makes it clear that companies are already aware of and trying to address consumers' expectations for delivery. Further, the challenge presented at the end of the text relates to new problems that tend to arise with solutions for logistical problems, not to a lack of understanding of what consumers want or how delivery volumes fluctuate. Choice C is incorrect. The text does suggest that rapid delivery is important for customer satisfaction and thus is a beneficial investment for companies, but that idea is already presented in the beginning of the text and doesn't logically follow as a conclusion from the information about innovations companies are exploring to solve last-mile logistics problems; the idea that the potential solutions tend to introduce new issues points to the feasibility of meeting consumer expectations, not to the general fact that it would be beneficial to reduce delivery times. Choice D is incorrect because the text doesn't suggest that there may be insufficient incentive for delivery companies to try to solve last-mile logistics problems

—on the contrary, the text directly indicates that delivery companies are already actively pursuing innovations to try to address those problems, citing the example of the use of aerial drones, even though the innovations can introduce new complications.

Question Difficulty: Hard

Question ID 1158b217

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 1158b217

Compiled in the late 1500s largely through the efforts of Indigenous scribes, *Cantares Mexicanos* is the most important collection of poetry in Classical Nahuatl, the principal language of the Aztec Empire. The poems portray Aztec society before the occupation of the empire by the army of Spain, and marginal notes in *Cantares Mexicanos* indicate that much of the collection's content predates the initial invasion. Nonetheless, some of the poems contain inarguable references to beliefs and customs common in Spain during this era. Thus, some scholars have concluded that _____

Which choice most logically completes the text?

A. while its content largely predates the invasion, *Cantares Mexicanos* also contains additions made after the invasion.

B. although those who compiled *Cantares Mexicanos* were fluent in Nahuatl, they had limited knowledge of the Spanish language.

C. before the invasion by Spain, the poets of the Aztec Empire borrowed from the literary traditions of other societies.

D. the references to beliefs and customs in Spain should be attributed to a coincidental resemblance between the societies of Spain and the Aztec Empire.

ID: 1158b217 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text. The text explains that the *Cantares Mexicanos* contains poems about the Aztec Empire from before the Spanish invasion. Furthermore, it indicates that notes in the collection attest that some of these poems predate the Spanish invasion, while some customs depicted are likely Spanish in origin. The implication is that some poems were composed before the invasion but the references to Spanish customs could have come about only after the invasion, and thus that the collection includes content that predates the invasion and also content from after the invasion.

Choice B is incorrect because the text clearly indicates that the collection is in Nahuatl, not Spanish, so the compilers' unfamiliarity with Spanish is irrelevant to whether the collection contains material composed after the Spanish invasion. Choice C is incorrect because the text mentions only the Aztec Empire and Spain: there is no information about the relationship of Aztec literature to any traditions other than its own or Spain's. Choice D is incorrect because the text states that some of the poems make "inarguable references" to common Spanish customs, which conflicts with the idea that these references can reasonably be attributed to mere coincidence.

Question Difficulty: Hard

Question ID 347e5a71

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 347e5a71

Aerogels are highly porous foams consisting mainly of tiny air pockets within a solidified gel. These lightweight materials are often applied to spacecraft and other equipment required to withstand extreme conditions, as they provide excellent insulation despite typically being brittle and eventually fracturing due to degradation from repeated exposure to high heat. Now, Xiangfeng Duan of the University of California, Los Angeles, and colleagues have developed an aerogel with uniquely flexible properties. Unlike earlier aerogels, Duan's team's material contracts rather than expands when heated and fully recovers after compressing to just 5% of its original volume, suggesting that _____

Which choice most logically completes the text?

A. the aerogel's remarkable flexibility results from its higher proportion of air pockets to solidified gel as compared to other aerogels.

B. the aerogel's overall strength is greater than that of other insulators but its ability to withstand exposure to intense heat is lower.

C. the aerogel will be more effective as an insulator for uses that involve gradual temperature shifts than for those that involve rapid heat increases.

D. the aerogel will be less prone to the structural weakness that ultimately causes most other aerogels to break down with use.

ID: 347e5a71 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of aerogels. The text states that aerogels—highly porous foams—offer "excellent insulation" but typically break down after prolonged exposure to high heat. However, according to the text, Duan and colleagues developed an aerogel that "contracts rather than expands when heated" and recovers its original volume after this contraction. Thus, it is logical to conclude that Duan's team's aerogel material will be less prone to the structural weakness that caused earlier aerogels to break down.

Choice A is incorrect. Although the text indicates that aerogels consist "mainly of tiny air pockets within a solidified gel," it doesn't mention the number or proportion of air pockets to solidified gel in typical aerogels or in the aerogel developed by Duan's team. Choice B is incorrect because the text suggests that the aerogel developed by Duan's team has a higher, not a lower, ability to withstand exposure to intense heat due to its contraction and subsequent recovery. Choice C is incorrect. Although the text discusses temperature tolerances of aerogels and says that they offer "excellent insulation despite typically being brittle and eventually fracturing," it doesn't discuss how different rates of temperature change can affect aerogels.

Question Difficulty: Hard

Question ID 2a9ae43a

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 2a9ae43a

Many of William Shakespeare's tragedies address broad themes that still appeal to today's audiences. For instance, *Romeo and Juliet*, which is set in the Italy of Shakespeare's time, tackles the themes of parents versus children and love versus hate, and the play continues to be read and produced widely around the world. But understanding Shakespeare's so-called history plays can require a knowledge of several centuries of English history. Consequently, _____

Which choice most logically completes the text?

A. many theatergoers and readers today are likely to find Shakespeare's history plays less engaging than the tragedies.

B. some of Shakespeare's tragedies are more relevant to today's audiences than twentieth-century plays.

C. *Romeo and Juliet* is the most thematically accessible of all Shakespeare's tragedies.

D. experts in English history tend to prefer Shakespeare's history plays to his other works.

ID: 2a9ae43a Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of the relative appeal of different kinds of plays by Shakespeare to today's audiences. According to the text, Shakespeare's tragedies address broad themes that continue to appeal to today's audiences. Indeed, the text suggests that these themes are timeless, as illustrated by the example of *Romeo and Juliet*, which the text states is still read and widely performed despite being set in the Italy of Shakespeare's time. In contrast, the text indicates that audiences and readers may need to be familiar with several centuries of English history in order to understand Shakespeare's history plays. Because many theatergoers and readers are unlikely to possess such extensive historical knowledge, it follows that they are likely to find Shakespeare's history plays less engaging than his more accessible tragedies.

Choice B is incorrect because the text never introduces a comparison between Shakespeare's tragedies and twentieth-century plays, only between Shakespeare's tragedies and his history plays. Since twentieth-century plays aren't mentioned, there's no basis in the text for the idea that some of Shakespeare's tragedies are more relevant than twentieth-century plays to today's audiences. Choice C is incorrect. Although the text indicates that *Romeo and Juliet* is thematically accessible to today's audiences, it doesn't suggest that *Romeo and Juliet* is more accessible than Shakespeare's other tragedies. Rather, the text presents *Romeo and Juliet* as an example to support the idea that Shakespeare's tragedies hold continued appeal for today's readers and theatergoers. Choice D is incorrect. Although experts in English history would likely possess the knowledge needed to understand Shakespeare's history plays, the text never mentions such experts or suggests that they would enjoy the history plays more than Shakespeare's other works.

Question Difficulty: Hard

Question ID b0f6a40e

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: b0f6a40e

In 2022, Crystal Reeck and colleagues studied whether the decision-making modes that guide consumers influence their choice between nonenvironmentally friendly standard electricity plans and environmentally friendly green plans that cap electricity usage. Study participants who self-reported using either an Affect Mode or Role Mode—which prioritize choices that have a stronger positive emotional or social impact, respectively—were more likely to select a green plan. Conversely, participants using a Calculation Mode—which aims to minimize both financial cost and personal inconvenience—were more likely to select a standard plan, even when the green option was cheaper. This finding suggests that participants using a Calculation Mode _____

Which choice most logically completes the text?

A. were equally unlikely to factor the financial savings of the green plan into their decision-making as were participants using either the Affect or Role Modes.

B. may have been less strongly motivated to appear socially responsible with their choice of plan than they realized.

C. may have determined that the green plan imposed additional burdens on them that were not sufficiently offset by the potential financial savings.

D. were less likely to believe that the green plan was truly cost-effective than were participants using either the Affect or Role Modes.

ID: b0f6a40e Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of the influence of decision-making modes on consumers' choices of different electricity plans. The Affect Mode describes choices based on the decision-maker's preferred emotional outcome, the Role Mode describes choices based on the decision-maker's social motivations, and the Calculation Mode describes choices based on minimizing financial costs and maximizing the decision-maker's convenience. Thus, if those using a Calculation Mode disfavor the green plan, it would be due to some financial or convenience burden the green plan imposes that the other doesn't. The text indicates that the green plan had a lower financial cost but was nonetheless rejected by participants using the Calculation Mode. It therefore follows that the green plan likely imposed a convenience burden that outweighed potential financial savings for these participants.

Choice A is incorrect. According to the text, the Affect Mode involves the decision-maker's preferred emotional outcome, the Role Mode involves social motivations, and the Calculation Mode is oriented toward minimizing financial costs and maximizing the decision-maker's convenience. Thus, unlike the Affect or Role Modes, the Calculation Mode would almost certainly involve taking price differences into account. Choice B is incorrect. According to the text, the Affect Mode involves the decision-maker's preferred emotional outcome, the Role Mode involves social motivations, and the Calculation Mode is oriented toward minimizing financial costs and maximizing the decision-maker's convenience. Thus, there is no reason to think that participants using the Calculation Mode at any point took social responsibility into account, let alone think that they discovered a disparity between their

expectations and reality. Choice D is incorrect. According to the text, the Affect Mode involves the decision-maker's preferred emotional outcome, the Role Mode involves social motivations, and the Calculation Mode is oriented toward minimizing financial costs and maximizing the decision-maker's convenience. Thus, the text doesn't indicate that cost-effectiveness is a factor for participants using the Affect or Role Modes, and there is no basis to compare their beliefs in the truthfulness of the green-plan description with those of the Calculation Mode users.

Question Difficulty: Hard

Question ID aeb27f70

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: aeb27f70

The single origin hypothesis of iron metallurgy posits that the craft originated in Anatolia (West Asia) circa 2200–2000 BCE before diffusing to other parts of the world, including Africa. Some proponents of the hypothesis argue that iron production technologies first arrived in North Africa through Carthage, where the earliest evidence of ironworking dates to approximately 800–600 BCE, before these technologies spread to sub-Saharan Africa over the following centuries. However, excavation of multiple sites on the Adamawa plateau in Central Africa conducted by Étienne Zangato and Augustin Holl uncovered evidence of iron workshops that may have been in operation as late as 900–750 BCE in Gbabari and as early as 2300–1900 BCE in Ôboui and Gbatoro. These findings suggest that _____

Which choice most logically completes the text?

A. iron production may have developed independently and relatively simultaneously in Anatolia and parts of Central Africa.

B. iron production technologies found in Gbabari likely derived directly from technologies transmitted from Anatolia, but those found in Ôboui and Gbatoro did not.

C. iron production technologies were likely transmitted from Anatolia to Central Africa via an alternate route than the one suggested by some proponents of the single origin hypothesis.

D. iron production may have originated in Anatolia much earlier than the available evidence currently indicates.

ID: aeb27f70 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of the origin of iron metallurgy in Africa. The text explains that the single origin hypothesis suggests that iron metallurgy originated in Anatolia in West Asia circa 2200–2000 BCE and then spread to other parts of the world, with some advocates of this hypothesis arguing that the technology reached sub-Saharan Africa through the North African site of Carthage, where evidence of ironworking dates as far back as approximately 800–600 BCE. However, according to the text, researchers uncovered evidence of iron workshops at one Central African site, Gbabari, dating to circa 900–750 BCE—slightly before ironworking in Carthage—and at two other sites in Central Africa, Ôboui and Gbatoro, dating to as early as 2300–1900 BCE—significantly before ironworking spread to Carthage and roughly contemporaneous with its emergence in Anatolia. If iron metallurgy's presence in Central Africa preceded its presence in North Africa, then this technology likely didn't diffuse from Carthage to Central Africa. Moreover, this technology's presence in Central Africa at roughly the same period when it originated in Anatolia would require its virtually immediate diffusion across the vast distances between the two regions—a development that would have been unlikely in the ancient world. Therefore, the researchers' findings suggest that iron production may have developed independently and relatively simultaneously in Anatolia and parts of Central Africa.

Choice B is incorrect. The findings presented in the text indicate that iron metallurgy may have been occurring in Ôboui and Gbatoro as early as 2300 BCE, which is earlier than it is thought to have emerged in Anatolia, and may have been occurring in

Gbabari as early as 900 BCE, which is earlier than it is thought to have arrived in Carthage as it began diffusing into Africa. These earlier instances suggest that instead of diffusing from Anatolia to Central Africa, this technology independently emerged in Central Africa instead, spreading from the earlier iron production sites in the region to the later site. Moreover, the text doesn't indicate any differences in the iron technologies used at the two earlier sites in Central Africa and the technology used at the later site that might suggest separate origins for iron metallurgy within the region. Choice C is incorrect because the text discusses findings that iron metallurgy may have been occurring in Central Africa at nearly the same time as or even slightly before it emerged in Anatolia, without time for it to have spread there from Anatolia—suggesting that the technology may have independently developed in parts of Central Africa. Thus, instead of suggesting an alternate route for the diffusion of iron production into Central Africa, the findings suggest that the technology didn't arrive there by diffusion through an intermediate geographical region at all. Choice D is incorrect because, as the text explains, researchers found that iron metallurgy may have been practiced at a Central African site as early as 2300–1900 BCE—a chronological range that not only predates the technology's spread from Anatolia to Carthage in North Africa circa 800–600 BCE but also overlaps with, and slightly precedes, the range assigned to its invention in Anatolia, 2200–2000 BCE. This finding suggests that instead of diffusing from Anatolia to Central Africa over a vast distance and a great expanse of time, this technology may have been independently invented by Central African civilizations at the same time as it was invented in Anatolia, if not slightly before then. Nothing in the text necessarily suggests that technology arose "much earlier" in Anatolia than the evidence there currently indicates.

Question Difficulty: Hard

Question ID 3d89704b

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 3d89704b

One recognized social norm of gift giving is that the time spent obtaining a gift will be viewed as a reflection of the gift's thoughtfulness. Marketing experts Farnoush Reshadi, Julian Givi, and Gopal Das addressed this view in their studies of norms specifically surrounding the giving of gift cards, noting that while recipients tend to view digital gift cards (which can be purchased online from anywhere and often can be redeemed online as well) as superior to physical gift cards (which sometimes must be purchased in person and may only be redeemable in person) in terms of usage, 94.8 percent of participants surveyed indicated that it is more socially acceptable to give a physical gift card to a recipient. This finding suggests that _____

Which choice most logically completes the text?

A. gift givers likely overestimate the amount of effort required to use digital gift cards and thus mistakenly assume gift recipients will view them as less desirable than physical gift cards.

B. physical gift cards are likely preferred by gift recipients because the tangible nature of those cards offers a greater psychological sense of ownership than digital gift cards do.

C. physical gift cards are likely less desirable to gift recipients than digital gift cards are because of the perception that physical gift cards require unnecessary effort to obtain.

D. gift givers likely perceive digital gift cards as requiring relatively low effort to obtain and thus wrongly assume gift recipients will appreciate them less than they do physical gift cards.

ID: 3d89704b Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of perceptions of digital versus physical gift cards. The text begins by explaining that the perception of "the time spent obtaining a gift…as a reflection of the gift's thoughtfulness" is a social norm of gift giving. The text then explains that although those who receive digital gift cards view them as easier to use than physical gift cards, a marketing study nonetheless showed that 94.8% of participants found physical gift cards more "socially acceptable" to give. The text specifically contrasts the ease with which digital gift cards "can be purchased online from anywhere" with the fact that physical gift cards "sometimes must be purchased in person"—suggesting the greater difficulty of obtaining physical cards. Given the text's initial premise that gift-giving norms equate the thoughtfulness of a gift with the effort involved in acquiring that gift, it is reasonable to infer that people perceive digital gift cards as requiring less effort to obtain and thus assume recipients will appreciate them less, even though recipients actually prefer gift cards in the more usable digital format.

Choice A is incorrect. Although the text does discuss recipients' preference of digital versus physical gift cards and the relative ease with which the two formats can be used, it doesn't consider the misconceptions that gift givers may have of these factors. Moreover, the text establishes that recipients regard digital gift cards as easier to use and therefore preferable to physical gift cards. Choice B is incorrect because the text doesn't consider whether recipients of gift cards feel a sense of ownership toward

them, nor does the text touch on the greater tangibility of physical versus digital gift cards. Instead, the text contrasts the two formats of gift cards in terms of their respective usability and the difficulty involved in acquiring them and discusses how those factors influence people's perceptions of the two formats. Choice C is incorrect because it contradicts the text, which explains that recipients regard digital gift cards as superior to physical ones because they are easier to use than physical cards, not because physical gift cards require greater effort to obtain than digital gift cards do. Moreover, the text doesn't characterize the effort required to obtain physical gift cards as "unnecessary."

Question Difficulty: Hard

Question ID 88a141f3

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 88a141f3

In the early nineteenth century, some Euro-American farmers in the northeastern United States used agricultural techniques developed by the Haudenosaunee (Iroquois) people centuries earlier, but it seems that few of those farmers had actually seen Haudenosaunee farms firsthand. Barring the possibility of several farmers of the same era independently developing techniques that the Haudenosaunee people had already invented, these facts most strongly suggest that _____

Which choice most logically completes the text?

A. those farmers learned the techniques from other people who were more directly influenced by Haudenosaunee practices.

B. the crops typically cultivated by Euro-American farmers in the northeastern United States were not well suited to Haudenosaunee farming techniques.

C. Haudenosaunee farming techniques were widely used in regions outside the northeastern United States.

D. Euro-American farmers only began to recognize the benefits of Haudenosaunee farming techniques late in the nineteenth century.

ID: 88a141f3 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of Euro-American farmers' use of Haudenosaunee agricultural techniques. According to the text, some Euro-American farmers were using these techniques in the early nineteenth century despite few of the farmers having seen Haudenosaunee farms. One explanation for these facts might be that the farmers developed techniques on their own that already had been invented centuries earlier by the Haudenosaunee people, but the text explicitly bars, or rules out, this explanation. If Euro-American farmers didn't learn these techniques from direct observation of Haudenosaunee practices and didn't invent the techniques independently, then the most logical explanation is that they learned the techniques from other people who were more directly influenced by Haudenosaunee practices than the farmers themselves were. Once they learned about Haudenosaunee agricultural practices, Euro-American farmers could then apply those practices to their own farming.

Choice B is incorrect because the fact that some Euro-American farmers in the northeastern United States were using Haudenosaunee techniques suggests that the techniques were likely useful for the crops the farmers raised, not that the crops typically cultivated by the farmers were not well suited to Haudenosaunee farming techniques. If the farmers' crops were ill suited to the techniques, it's unlikely that the farmers would have used those techniques. Choice C is incorrect because the text indicates only that Haudenosaunee agricultural techniques were used by Euro-American farmers in the northeastern United States, not that these techniques were widely used outside this region. Choice D is incorrect because the text states that some Euro-American farmers were using Haudenosaunee farming techniques early in the nineteenth century. This suggests that some Euro-American farmers were beginning to recognize the benefits of these techniques near the start of the century, not that such farmers only began to recognize the benefits of the techniques much later.

Question Difficulty: Hard

Question ID 870c7581

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 870c7581

One theory behind human bipedalism speculates that it originated in a mostly ground-based ancestor that practiced four-legged "knuckle-walking," like chimpanzees and gorillas do today, and eventually evolved into moving upright on two legs. But recently, researchers observed orangutans, another relative of humans, standing on two legs on tree branches and using their arms for balance while they reached for fruits. These observations may suggest that _____

Which choice most logically completes the text?

A. bipedalism evolved because it was advantageous to a tree-dwelling ancestor of humans.

B. bipedalism must have evolved simultaneously with knuckle-walking and tree-climbing.

C. moving between the ground and the trees would have been difficult without bipedalism.

D. a knuckle-walking human ancestor could have easily moved bipedally in trees.

ID: 870c7581 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of the evolution of bipedalism in humans. According to the text, one potential explanation for humans walking upright on two legs is that the behavior evolved from an ancestor that mostly stayed on the ground and walked on four limbs, as modern chimpanzees and gorillas do. However, the finding that orangutans, also a relative of humans, sometimes stand on two legs in trees while using their arms to balance and reach for fruits suggests another possible explanation: perhaps a tree-dwelling ancestor of humans began moving on two legs because it offered an advantage, such as access to certain foods.

Choice B is incorrect because the finding that modern orangutans (a relative of humans) sometimes stand on two legs in trees doesn't offer any insight into when either bipedalism or tree-climbing behavior emerged in human ancestors. Additionally, the text indicates that one theory is that bipedalism evolved from a mostly ground-based ancestor that was already practicing knuckle-walking, not that bipedalism and knuckle-walking developed at the same time. Choice C is incorrect because the finding that orangutans (a relative of humans) sometimes stand on two legs in trees doesn't offer any insight into how difficult it would've been to move between the ground and the trees without bipedalism; there's no suggestion that climbing or moving in trees depends on the ability to walk on two legs rather than four, even if that ability might be helpful in certain circumstances. Choice D is incorrect because the finding that orangutans (a relative of humans) sometimes stand on two legs in trees doesn't suggest that a knuckle-walking human ancestor could've easily moved on two legs in trees. Although the text indicates that bipedalism may have evolved from a human ancestor that mostly stayed on the ground and walked on four limbs, it gives no indication of how easy it would've been for such an ancestor to move bipedally in trees.

Question Difficulty: Hard

Question ID d02ffc30

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: d02ffc30

Tides can deposit large quantities of dead vegetation within a salt marsh, smothering healthy plants and leaving a salt panne—a depression devoid of plants that tends to trap standing water—in the marsh's interior. Ecologist Kathryn Beheshti and colleagues found that burrowing crabs living within these pannes improve drainage by loosening the soil, leading the pannes to shrink as marsh plants move back in. At salt marsh edges, however, crab-induced soil loosening can promote marsh loss by accelerating erosion, suggesting that the burrowing action of crabs _____

Which choice most logically completes the text?

A. can be beneficial to marshes with small pannes but can be harmful to marshes with large pannes.

B. may promote increases in marsh plants or decreases in marsh plants, depending on the crabs' location.

C. tends to be more heavily concentrated in areas of marsh interiors with standing water than at marsh edges.

D. varies in intensity depending on the size of the panne relative to the size of the surrounding marsh.

ID: d02ffc30 Answer

Correct Answer: B

Rationale

Choice B is the best answer. The text says that crab burrowing in the pannes enables plants to grow there again. It also says that crab burrowing at the edges of the marsh speeds up marsh loss. This suggests that burrowing crabs can either help or hurt marshes, depending on where they're located.

Choice A is incorrect. This inference isn't supported. The text never discusses pannes of different sizes. Choice C is incorrect. This inference isn't supported. The text never suggests that crabs do more burrowing in the pannes (the areas with standing water) than they do at the edges. Rather, the text says that the burrowing that happens in the pannes is beneficial, while the burrowing that happens at the edges is harmful. Choice D is incorrect. This inference isn't supported. The text never discusses the intensity of crab burrowing, nor does it discuss the size of the panne relative to the size of the marsh.

Question Difficulty: Hard

Question ID 780331f8

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 780331f8

Aptamers—synthetic DNA or RNA molecules that bind to target molecules—can be used to test for foodborne bacterial pathogens, though their specificity (the probability of returning a negative result in the absence of the focal pathogen) in real-world foods has been unclear. Sandeep Somvanshi et al. fabricated test paper incorporating aptamers targeting strain O157:H7 of the bacteria *Escherichia coli*; the paper shifts from pink to purple as the aptamers bind to target molecules. Somvanshi et al. tested the paper in store-bought pear juice they treated with *E. coli* O157:H7, other strains of *E. coli*, or other bacteria species. Following exposure, the paper from the O157:H7 test was purple while papers from the other tests were pink, suggesting that _____

Which choice most logically completes the text?

A. aptamer-based tests in real-world foods are more likely to show a high degree of specificity if the focal pathogen is *E. coli* O157:H7 than if the focal pathogen is another strain of *E. coli* or another species.

B. uncertainty about the specificity of aptamer-based tests for pathogens in real-world foods may be due to the similarity between *E. coli* O157:H7 and other *E. coli* strains.

C. the specificity of the tests in a real-world food was unaffected by the aptamers' tendency to bind to different strains of *E. coli*.

D. the aptamers successfully bound to *E. coli* O157:H7 and the tests displayed a high degree of specificity in a real-world food.

ID: 780331f8 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of aptamers' capacity to test for pathogens in food. The text explains that although synthetic aptamer molecules can be used to test for foodborne bacterial pathogens because they bind to target molecules, it hasn't been clear how likely it is that they will indicate a negative result when a target pathogen is absent in real-world foods. The text then indicates that Somvanshi et al. created test paper that changes from pink to purple when aptamers in it bind to a particular strain of *E. coli* bacteria, O157:H7, and tested it with store-bought pear juice (that is, a real-world food); the paper changed to purple when exposed to juice to which the target pathogen *E. coli* O157:H7 had been added, but it remained pink when exposed to juice treated with other *E. coli* strains or other bacteria species. Based on this result, it seems the aptamers in the paper successfully bound to the target (O157:H7) and the tests had a high degree of specificity (providing negative results for samples where the target was absent even though other bacteria were present) when applied to a real-world food.

Choice A is incorrect because nothing in the text suggests that *E. coli* O157:H7 differs from other pathogens in a way that makes it more suitable for aptamer-based testing of any kind and that specificity is likely to be lower when aptamer-based tests target other bacteria; the text simply indicates that Somvanshi et al. used O157:H7 as the target for aptamer-based test paper in their study and suggests that the paper had a high degree of specificity. Choice B is incorrect because the text indicates that the specificity of aptamer-based tests in real-world foods is uncertain for pathogens broadly, not just for *E. coli*, and similarity

between strains (of *E. coli* or of other pathogens) isn't mentioned. Moreover, the results presented in the text suggest that aptamers are actually capable of distinguishing between strains of *E. coli*, since Somvanshi et al.'s paper turned purple when exposed to *E. coli* O157:H7 and remained pink when exposed to other strains. Choice C is incorrect because the text suggests that the aptamers in the test papers didn't bind to different strains of *E. coli*. The text explains that the test papers turn purple when the aptamers bind to the targeted pathogen and that in the pear juice tests, the test papers turned purple when exposed to samples with the targeted strain of *E. coli* (O157:H7) but remained pink when exposed to samples with other strains of *E. coli*. In other words, the aptamers bound only to the targeted strain, not to the other strains. Further, specificity would be affected if the aptamers had bound to multiple strains and not just the targeted one; that result would cause the specificity to be low.

Question Difficulty: Hard

Question ID ec1cd1d0

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: ec1cd1d0

In a study of the cognitive abilities of white-faced capuchin monkeys (*Cebus imitator*), researchers neglected to control for the physical difficulty of the tasks they used to evaluate the monkeys. The cognitive abilities of monkeys given problems requiring little dexterity, such as sliding a panel to retrieve food, were judged by the same criteria as were those of monkeys given physically demanding problems, such as unscrewing a bottle and inserting a straw. The results of the study, therefore, _____

Which choice most logically completes the text?

A. could suggest that there are differences in cognitive ability among the monkeys even though such differences may not actually exist.

B. are useful for identifying tasks that the monkeys lack the cognitive capacity to perform but not for identifying tasks that the monkeys can perform.

C. should not be taken as indicative of the cognitive abilities of any monkey species other than *C. imitator*.

D. reveal more about the monkeys' cognitive abilities when solving artificial problems than when solving problems encountered in the wild.

ID: ec1cd1d0 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents the conclusion that most logically follows from the text's discussion of the study of capuchin monkeys' cognitive abilities. The text explains that the study failed to distinguish between outcomes for the tasks performed by the capuchin monkeys, such that simpler tasks requiring less dexterity, or skill, were judged by the same criteria as tasks that demanded more dexterity. Because the study didn't account for this discrepancy, the researchers might have assumed that observed differences in performance were due to the abilities of the monkeys rather than the complexity of the tasks. In other words, the results may suggest cognitive differences among the monkeys even though such differences may not really exist.

Choice B is incorrect because the text focuses on the fact that the tasks assigned to the capuchin monkeys in the study varied in difficulty and that the variety wasn't taken into consideration. The text doesn't suggest that the capuchin monkeys couldn't perform certain tasks, just that some tasks were more difficult to do. Choice C is incorrect because the text doesn't suggest that the study's results are indicative of the abilities of capuchin monkeys but not of other monkey species; in fact, the text suggests that the results may not even be an accurate reflection of capuchin monkeys' abilities. Choice D is incorrect because the text doesn't indicate that the researchers compared results for artificial tasks with those for tasks encountered in the wild, although the tasks described in the text—sliding a panel and putting a straw in a bottle—are presumably artificial.

Question Difficulty: Hard

Question ID d184752f

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: d184752f

Archaeologists and historians used to believe that the Maya civilization during its Classic period (roughly 250–900) lacked agricultural marketplaces. One reason for this belief was that these scholars misunderstood the ecology of the regions the Maya inhabited. Marketplaces typically emerge because different individuals or groups want to trade resources they control for resources they don't control. Scholars seriously underestimated the ecological diversity of the Maya landscape and thus assumed that _____

Which choice most logically completes the text?

A. marketplaces likely would not have attracted many traders from outside the regions controlled by the Maya.

B. farming practices would have been largely the same throughout Maya lands even if the crops people produced varied significantly.

C. marketplaces would not have enabled Maya people to acquire many products different from those they already produced.

D. farmers would trade agricultural products only if they had already produced enough to meet their own needs.

ID: d184752f Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents the conclusion that most logically follows from the text's discussion of scholars' understanding of Maya ecology and agricultural marketplaces. The text indicates that scholars used to believe that during the Classic period, the Maya civilization didn't have agricultural marketplaces. According to the text, scholars held this view because they misunderstood the ecology of areas where the Maya lived. The text points out that people tend to create marketplaces in order to acquire resources they don't otherwise control. Agricultural marketplaces would have allowed farmers who produced one type of crop to trade that crop for other types of crops that they didn't produce. The text goes on to say, however, that scholars underestimated the ecological diversity of the Maya areas, meaning that scholars thought that the Maya landscape produced a smaller range of resources than it actually produced. Taken together, then, this information suggests that scholars assumed that marketplaces wouldn't have allowed Maya people to acquire products different from the products they already produced: that is, if everyone produced the same array of crops, as scholars mistakenly believed, then there wouldn't have been any need for marketplaces where people could trade those crops.

Choice A is incorrect because the text doesn't say anything about trade between the Maya and people from outside the regions controlled by the Maya. Although scholars' mistaken belief that the Maya lands weren't very ecologically diverse would give those scholars a reason to think that the Maya didn't have marketplaces, it wouldn't lead scholars to assume that traders from outside Maya lands were uninterested in acquiring resources produced by the Maya. Even if the Maya actually did produce only a small array of resources throughout their lands, there is no reason to believe from the text that people outside Maya lands also produced these same resources and thus would have no need to trade with the Maya people. Choice B is incorrect because the text indicates that scholars underestimated the ecological diversity of the Maya lands, which suggests that they mistakenly

believed that the Maya produced a relatively small array of resources throughout their territory, not that the crops the Maya produced varied significantly throughout the Maya lands. Although the scholars might have assumed that a lack of ecological diversity suggests that Maya farming practices were largely the same everywhere, the text does not support that they also assumed there was a lot of variation in the crops that Maya people produced. In fact, the text states that marketplaces emerge when people want to obtain resources they don't already control. If it were the case that scholars assumed that the crops Maya people produced varied significantly, this would have led them to conclude that Maya people likely established marketplaces so they could trade for resources they didn't already possess, not that the Maya civilization lacked marketplaces. Choice D is incorrect because nothing in the text suggests that scholars assumed that farmers wouldn't trade their agricultural products unless they had already met their own needs with those products. Instead, the text says that scholars thought that the Maya lands produced a smaller array of resources than they actually did, which the text suggests led scholars to assume that the Maya didn't have any need for marketplaces. The scholars' mistaken belief has no bearing on the issue of whether farmers met their own needs before trading their products.

Question Difficulty: Hard

Question ID 252b1ef7

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 252b1ef7

One challenge when researching whether holding elected office changes a person's behavior is the problem of ensuring that the experiment has an appropriate control group. To reveal the effect of holding office, researchers must compare people who hold elected office with people who do not hold office but who are otherwise similar to the office-holders. Since researchers are unable to control which politicians win elections, they therefore _____

Which choice most logically completes the text?

A. struggle to find valid data about the behavior of politicians who do not currently hold office.

B. can only conduct valid studies with people who have previously held office rather than people who presently hold office.

C. should select a control group of people who differ from office-holders in several significant ways.

D. will find it difficult to identify a group of people who can function as an appropriate control group for their studies.

ID: 252b1ef7 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents the conclusion that most logically follows from the text's discussion of the challenge researchers face when studying the effects of holding elected office on a person's behavior. The text explains that it's hard for researchers to test for the effects that elected office has on people because finding people to serve as a control group is difficult. The text indicates that a control group needs to be made up of people who share characteristics of the group being tested but don't have the variable being tested (in this case, holding elected office). Because researchers aren't able to influence who wins elections, they're also unable to determine who would serve as an appropriately similar member of a control group. Thus, it logically follows that researchers will find it difficult to identify a group of people who can function as an appropriate control group for their studies.

Choice A is incorrect because the text focuses on the struggle to put together a control group for experiments; it doesn't suggest that finding information about politicians' behavior is difficult. Choice B is incorrect because the experiments mentioned in the text are testing the effects of holding elected office on a person's behavior. Studying people who have already held elected office wouldn't provide an opportunity to note any behavioral changes that the position might cause. Choice C is incorrect because the text defines people in a control group as those "who are otherwise similar to the office-holders"; selecting people who differ from the office-holders wouldn't fit the criteria for an appropriate control group.

Question Difficulty: Hard

Question ID db136611

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: db136611

The alpaca was domesticated by Indigenous peoples in the Andes about 7,000 years ago. But which wild species did it descend from, the vicuña or guanaco? A research team led by Ruiwen Fan may have solved the mystery, concluding that the alpaca is the domesticated form of the vicuña but that the modern alpaca gets only 64 percent of its genetic material from its wild ancestor. The rest comes from the domesticated llama. The llama, meanwhile, gets 95.5 percent of its genetic material from its own wild ancestor, the guanaco, and the rest from the alpaca. The llama and alpaca apparently interbred widely for only a handful of generations between 400 and 600 years ago. Assuming that the findings of Fan's team are valid, it can be inferred that _____

Which choice most logically completes the text?

A. modern llama populations have a greater degree of genetic diversity, on average, than modern alpaca populations do.

B. the domestication process of the alpaca may have involved some introduction of genetic material from the llama.

C. the period of interbreeding resulted in a greater genetic difference between alpacas and their wild ancestors than between llamas and their wild ancestors.

D. if they were subjected to genetic testing, modern populations of guanacos and vicuñas would likely show traces of ancient interbreeding as well.

ID: db136611 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it presents the inference that most logically follows from the text's discussion of the genetic material of alpacas. The text states that modern alpacas get only 64 percent of their genetic material from their wild ancestor (the vicuña), while llamas get 95.5 percent of their genetic material from their wild ancestor (the guanaco). These data imply that relative to llamas, alpacas have experienced a much greater genetic shift away from their wild ancestors (36 percent of their genetic material derives from another source, compared to 4.5 percent of llamas' genetic material). Moreover, the text establishes that the remainder of alpacas' genetic material derives from llamas, and the remainder of llamas' genetic material derives from alpacas, reflecting a period of interbreeding. Taken together, these details support the inference that the period of interbreeding had a more significant impact on the genetic material of alpacas than on that of llamas, thereby reducing the percentage of alpacas' genetic material that derives from wild ancestors and placing alpacas at a greater remove from these ancestors.

Choice A is incorrect because the text doesn't provide information about genetic diversity within modern llama and alpaca populations. While the text discusses the percentage of genetic material each domesticated species inherited from its wild ancestor and from interbreeding, it does not address the level of genetic variation within each species. Therefore, it isn't logical to infer that modern llama populations have a greater degree of genetic diversity than modern alpaca populations do. Choice B is incorrect because it contradicts the chronology presented in the text. The text states that alpacas were domesticated about 7,000 years ago, but the interbreeding with llamas occurred "between 400 and 600 years ago." The genetic mixing happened thousands of years after domestication, not during it; in addition, the text does not provide details about what the process of domestication

might entail. Therefore, it isn't logical to infer that llama genetic material was introduced during the domestication process of alpacas. Choice D is incorrect because though the text notes that guanacos and vicuñas contributed to the genetic material of alpacas and llamas, it only discusses alpacas' and llamas' genetic composition. Therefore, the text does not support the inference that modern populations of guanacos and vicuñas would likely show traces of ancient interbreeding.

Question Difficulty: Hard

Question ID 1e58ef05

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 1e58ef05

Silicon-based photovoltaic cells account for 95% of the cells used in solar panels worldwide despite converting an average of only 18–22% of the sunlight that reaches them. In a study addressing this relative inefficiency, a team led by Laura Miranda-Pérez demonstrated that the addition of a thin layer of the mineral perovskite—which captures the blue range of light in the solar spectrum, whereas silicon captures the red range—allows the cells to convert 29.5% or more of the Sun's energy into usable electricity. Cells made with only perovskite, however, are no more efficient than silicon-based ones. It's reasonable to conclude, then, that _____

Which choice most logically completes the text?

A. photovoltaic cells with both silicon and perovskite are more efficient because they make use of more of the solar spectrum.

B. photovoltaic cells with only perovskite and no silicon would likely convert more than 29.5% of the Sun's energy.

C. solar power will remain elusive until photovoltaic cells are replaced with a more practical technology.

D. researchers need to evaluate whether other minerals like perovskite are as effective as perovskite seems to be.

ID: 1e58ef05 Answer

Correct Answer: A

Rationale

Choice A is the best answer because it presents the conclusion that most logically completes the text's discussion of the efficiency of various photovoltaic cells. The text indicates that Miranda-Pérez and her team found that adding a layer of perovskite to silicon-based cells increased the percentage of sunlight converted to usable electricity relative to the percentage converted to electricity by silicon-based cells. Using cells with only perovskite and no silicon, however, resulted in no improvement in efficiency over silicon-based cells. The text also states that perovskite captures light in the blue range of the solar spectrum and silicon captures light in the red range of the spectrum. If perovskite and silicon capture different parts of the solar spectrum and the combination of perovskite and silicon results in greater efficiency than the use of either perovskite or silicon alone does, then it is reasonable to infer that the improved efficiency of perovskite-silicon cells could be attributable to their making use of more of the solar spectrum than perovskite-based or silicon-based cells do.

Choice B is incorrect because it is directly contradicted by the text, which says that silicon-based cells convert 18%–22% of the sunlight that reaches them to electricity and that cells with only perovskite are no more efficient than silicon-based cells are. Perovskite-only cells thus must convert 22% or less—not more than 29.5%—of the sunlight that reaches them to electricity. Choice C is incorrect because the text focuses on a possible improvement to photovoltaic cells and makes no mention of any alternatives to those cells, so there is no reason to conclude that photovoltaic cells must be replaced with some other technology. Additionally, the text presents solar power as something that currently exists, so it wouldn't make sense to conclude that solar power will remain elusive. Choice D is incorrect because nothing in the text suggests that there is a need to evaluate the effectiveness of other minerals than perovskite. In fact, the text gives no indication that it is even possible to use other minerals

than silicon and perovskite in photovoltaic cells. Instead, the text is focused on the effect of combining perovskite and silicon and the different parts of the solar spectrum that perovskite and silicon capture.

Question Difficulty: Hard

Question ID 5db9e88a

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 5db9e88a

German theater practitioner Bertolt Brecht (1898–1956) believed that theater should elicit an intellectual rather than an emotional response from audiences, provoking them to consider social and political realities that extend beyond the characters and events depicted onstage. Brecht's influence can be seen in English playwright Caryl Churchill's 1979 play *Cloud 9*: although the play sometimes invites empathetic reactions, it primarily works to engage audiences in an interrogation of patriarchy and colonialism, which it does by placing audiences at a distance, thereby encouraging them to _____

Which choice most logically completes the text?

A. focus on the characters' beliefs about social and political issues as revealed by the characters' actions.

B. reflect on social and political phenomena not directly related to patriarchy and colonialism.

C. recognize pertinent social and political parallels between Germany during Brecht's time and England at the time when Churchill was writing *Cloud 9*.

D. be dispassionate as they think critically about the social and political questions raised by the play.

ID: 5db9e88a Answer

Correct Answer: D

Rationale

Choice D is the best answer. Churchill's play was influenced by Brecht's belief that theater should elicit an intellectual rather than an emotional response from audiences, making them think about social and political issues that also exist outside of the play. Therefore, it makes sense that Churchill would strive to have audiences think dispassionately (i.e., without emotion) and critically about the social and political questions raised by the play.

Choice A is incorrect. The passage mentions that Churchill was influenced by Brecht's belief that plays should provoke audience members "to consider social and political realities that extend beyond the characters and events depicted onstage," so there's no basis for an inference about audience members deeply engaging with characters' beliefs and actions. Choice B is incorrect. Reflecting on things that aren't related to patriarchy and colonialism wouldn't "engage audiences in an interrogation of patriarchy and colonialism." That creates a confusing contradiction. Choice C is incorrect. No mention is made of social and political issues in Germany during Brecht's time, so there's no basis for this inference.

Question Difficulty: Hard

Question ID 9171f2b5

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 9171f2b5

In a 2017 article, historian Jasmine Kilburn-Toppin explains that in early modern London, members of the city's guilds (trade and artisanal associations) were participants in a civic culture in which gift giving both signaled and conferred social status. Research on this phenomenon has tended to focus on philanthropic gifting by London's largest guilds; for her part, Kilburn-Toppin focuses on the gifting of handmade objects and fixtures (such as decorative paneling or plasterwork) within the craft guilds, which were "composed of highly discerning producers and consumers of material cultures." Given this characterization, it can reasonably be inferred that the gifting of such objects may have _____

Which choice most logically completes the text?

A. ensured that knowledge of the materials and techniques used by members of the craft guilds stayed within the craft guilds.

B. emphasized ostentatious offerings in the case of the largest guilds and prosaic objects in the case of the craft guilds.

C. functioned as a way for craft guild members to maintain and enhance their professional reputations among their peers.

D. conferred greater social status when the recipient belonged to one of London's largest guilds than when the recipient belonged to a craft guild.

ID: 9171f2b5 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it logically completes the text's discussion of the role of gift giving among members of guilds in early modern London. According to the text, members of these guilds participated in a culture where giving gifts "both signaled and conferred social status"—that is, it indicated people's social standing and also gave them social standing—and occurred in the forms of both philanthropic gifting (donations for humanitarian purposes) by large guilds, which much research has focused on, and the gifting of handmade items between craft guild members, which Kilburn-Toppin focuses on. The text indicates that Kilburn-Toppin characterizes craft guild members as people who made and consumed items and were "highly discerning," or were careful judges of quality. Because gift giving benefited one's status and if craft guild members were particularly attentive to quality, it follows that gifting handmade items within the guilds—between people who had high standards for items they made and for items they received—may have been a way for members to maintain and enhance their professional reputations, or their professional statuses, among their peers.

Choice A is incorrect because the text emphasizes the idea that members of guilds participated in gift giving both to display and receive social status, suggesting that the gifting of handmade items between the "highly discerning" members of craft guilds had to do with the members' interest in quality and status; nothing in the text suggests that the practice of gifting those items within the craft guilds was intended to limit knowledge of materials and techniques to the members of those guilds. Choice B is incorrect because the text doesn't distinguish between "ostentatious," or very showy, and "prosaic," or ordinary, gifts and because the characterization at the end of the text pertains specifically to the gifting of handmade items indicative of great taste, not prosaic items, between members of craft guilds. And while the text indicates that London's largest guilds gave philanthropic gifts

(donations for humanitarian purposes), it doesn't indicate whether these gifts would have been considered ostentatious. Choice D is incorrect because the characterization presented at the end of the text pertains specifically to the "highly discerning" members of craft guilds giving their handmade items as gifts to one another within the craft guilds; the text doesn't suggest anything about gifting those items to members of London's largest guilds or how that might affect status differently from giving them to other craft guild members.

Question Difficulty: Hard

Question ID e0bd7449

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: e0bd7449

For its 1974 work *Instant Mural*, the Chicano art collective Asco taped members Patssi Valdez and Humberto Sandoval to an outdoor wall in East Los Angeles. The work is manifestly a commentary on constraint, but many critics focus on Valdez and the social constraints women faced at the time, which is understandable but leaves the presence of Valdez's male collaborator Sandoval unexplained. We should instead consider that in 1974, the art establishment's recognition of Chicano artists was (and had long been) restricted to sociohistorical muralists, leaving nonmuralist Chicano artists—like Asco's members—struggling to even exhibit their work; attending to this context opens an interpretation that accounts for all the evidence, allowing us to conclude that _____

Which choice most logically completes the text?

A. while Valdez's presence in *Instant Mural* represents the social constraints placed on women at the time, Sandoval's presence represents Chicano muralists' frustration at their lack of recognition by the art establishment.

B. the main subject of *Instant Mural* is female Chicano artists' experience of being doubly constrained by gender-role expectations and the marginalization of certain types of art.

C. *Instant Mural* is a reflection on the constraining aesthetic expectations placed on Chicano artists in general rather than on the social constraints placed on women specifically.

D. *Instant Mural* is best understood not as a critique of the social constraints placed on women but rather as a critique of sociohistorical muralists' depictions of Chicano culture.

ID: e0bd7449 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of *Instant Mural*. According to the text, the 1974 work *Instant Mural* involved taping two Asco members (Patssi Valdez and Humberto Sandoval) to an outdoor wall as a direct commentary on constraint (limitation or restriction). The text suggests that instead of focusing on Valdez's role in the work and on social limitations women faced at the time—an approach that fails to explain the role of Sandoval, a man—people should consider that in 1974 (and long before) the art establishment limited recognition of Chicano artists to those who created murals with social and historical subjects, making it challenging for nonmuralist Chicano artists (such as Asco's members) to show their work. The text suggests that considering the situation with the art establishment leads to a conclusion that accounts for the fact that *Instant Mural* is explicitly about constraint and features both a woman and a man taped to the wall: *Instant Mural* isn't a reflection of the social constraints placed on women specifically but instead is a reflection on the constraining aesthetic expectations placed on Chicano artists in general (that is, the limits resulting from the lack of recognition of Chicano artists of any gender who did not create sociohistorical murals).

Choice A is incorrect. The text indicates that the art establishment in 1974 (and earlier) did recognize Chicano muralists to the exclusion of other Chicano artists, so there's no reason to assume Asco's work *Instant Mural* was intended to represent Chicano

muralists' frustration; it's far more likely that Asco's members—described as Chicano nonmuralists—were representing their own frustration at being unrecognized by the art establishment. Choice B is incorrect. The text emphasizes that while a common approach to *Instant Mural* focuses on Valdez and the social limitations women faced in 1974 but fails to account for the presence of a man in the work, there is a conclusion that explains Sandoval's role. But concluding that *Instant Mural* represents a double constraint experienced specifically by female Chicano artists would still fail to account for the inclusion of a man in the work. Choice D is incorrect. Although the text suggests that *Instant Mural* can be understood as something other than a commentary on social constraints women faced in 1974, it doesn't suggest that the work is best understood as a critique of the content of any other artworks. The text doesn't address how Chicano culture is depicted in sociohistorical murals; it discusses such murals only to make the point that in 1974 (and earlier) the art establishment recognized Chicano artists who produced them to the exclusion of Chicano nonmuralists, indicating a constraint all of Asco's members faced, regardless of gender.

Question Difficulty: Hard

Question ID b7af5e1f

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: b7af5e1f

Some *Astyanax mexicanus*, a river-dwelling fish found in northeast Mexico, have colonized caves in the region. Although there is little genetic difference between river and cave *A. mexicanus* and all members of the species can emit the same sounds, biologist Carole Hyacinthe and colleagues found that the context and significance of those sounds vary by location—e.g., the click that river-dwelling *A. mexicanus* use to signal aggression is used by cave dwellers when foraging—and the acoustic properties of cave fish sounds show some cave-specific variations as well. Hyacinthe and colleagues note that differences in sonic communication could accumulate to the point of inhibiting interbreeding among fish from different locations, suggesting that _____

Which choice most logically completes the text?

A. although *A. mexicanus* living in rivers are genetically similar to those living in caves, river fish rely on sonic communication less than cave fish do.

B. although *A. mexicanus* is a single species at present, it could be in the process of splitting into distinct populations with different characteristics.

C. although all *A. mexicanus* emit sounds, the fish living in rivers produce some sounds that the fish living in caves do not, and vice versa.

D. although *A. mexicanus* from different locations can interbreed currently, river fish and cave fish are sufficiently genetically distinct that they can be considered separate species.

ID: b7af5e1f Answer

Correct Answer: B

Rationale

Choice B is the best answer because it presents the conclusion that most logically follows from the text's discussion of *A. mexicanus*. According to the text, *A. mexicanus*, a river-dwelling fish species, has colonized caves. The fish that live in rivers and those that live in caves show no significant genetic differences and are all capable of making the same sounds. The text indicates, however, that Hyacinthe and colleagues found that sounds that the river fish use in a particular context and for a particular purpose are used in a different context and for a different purpose by the cave fish. Additionally, the sounds made by cave fish show some differences depending on the specific cave the fish inhabit. The text goes on to state that Hyacinthe and colleagues have noted that differences in how the fish use sound to communicate could eventually become so great that they prevent fish from different locations from interbreeding. In other words, the river fish might eventually only breed with other river fish (with whom they share characteristics regarding sonic communication that they do not share with cave fish), while the cave fish might only breed with other cave fish for a similar reason. In context, this observation suggests that even though the fish are a single species right now, they could be in the process of splitting into distinct populations with different characteristics.

Choice A is incorrect because there is no information in the text suggesting that the river fish are less reliant on sonic communication than the cave fish are. Although the text does indicate that the river fish and cave fish are genetically similar, the text describes both groups as using sonic communication and says nothing to indicate that one group depends on that

communication more than the other group does. Choice C is incorrect. The text states that all members of the species can emit the same sounds but that the function and context of sounds differ depending on whether the fish live in rivers or caves, but it does not indicate that river fish produce sounds that cave fish do not or vice versa. Choice D is incorrect because it contradicts the text. The text says that there is little genetic difference between the river fish and the cave fish, not that the river fish and cave fish are so genetically distinct that they can be considered separate species.

Question Difficulty: Hard

Question ID f0715d3f

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: f0715d3f

Ratified by more than 90 countries, the Nagoya Protocol is an international agreement ensuring that Indigenous communities are compensated when their agricultural resources and knowledge of wild plants and animals are utilized by agricultural corporations. However, the protocol has shortcomings. For example, it allows corporations to insist that their agreements with communities to conduct research on the commercial uses of the communities' resources and knowledge remain confidential. Therefore, some Indigenous advocates express concern that the protocol may have the unintended effect of _____

Which choice most logically completes the text?

A. diminishing the monetary reward that corporations might derive from their agreements with Indigenous communities.

B. limiting the research that corporations conduct on the resources of the Indigenous communities with which they have signed agreements.

C. preventing independent observers from determining whether the agreements guarantee equitable compensation for Indigenous communities.

D. discouraging Indigenous communities from learning new methods for harvesting plants and animals from their corporate partners.

ID: f0715d3f Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the argument about an unintended effect of the Nagoya Protocol. The text explains that the Nagoya Protocol is an agreement ensuring that Indigenous communities are compensated when their agricultural resources and knowledge are used by corporations. The text then states that the protocol allows corporations to keep their agreements with Indigenous communities confidential, about which some Indigenous advocates express concern. Choice C, when inserted into the blank, gives a good justification for the advocates' concern: such secrecy could mean that the public is unable to determine whether participating Indigenous communities were properly compensated under these agreements.

Choice A is incorrect. The text suggests that because corporations can keep their agreements with Indigenous communities confidential, Indigenous communities, not corporations, might not be compensated fairly. Choice B is incorrect because the text doesn't suggest that the ability of corporations to keep their agreements with Indigenous communities confidential would place limits on how much research corporations can undertake. Choice D is incorrect because the text doesn't indicate that Indigenous communities aim to learn new harvesting methods from their corporate partners. Rather, the text suggests that corporations use the knowledge of Indigenous communities for their research.

Question Difficulty: Hard

Question ID 11795d4d

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 11795d4d

The domestic sweet potato (*Ipomoea batatas*) descends from a wild plant native to South America. It also populates the Polynesian Islands, where evidence confirms that Native Hawaiians and other Indigenous peoples were cultivating the plant centuries before seafaring first occurred over the thousands of miles of ocean separating them from South America. To explain how the sweet potato was first introduced in Polynesia, botanist Pablo Muñoz-Rodríguez and colleagues analyzed the DNA of numerous varieties of the plant, concluding that Polynesian varieties diverged from South American ones over 100,000 years ago. Given that Polynesia was peopled only in the last three thousand years, the team concluded that _____

Which choice most logically completes the text?

A. the cultivation of the sweet potato in Polynesia likely predates its cultivation in South America.

B. Polynesian peoples likely acquired the sweet potato from South American peoples only within the last three thousand years.

C. human activity likely played no role in the introduction of the sweet potato in Polynesia.

D. Polynesian sweet potato varieties likely descend from a single South American variety that was domesticated, not wild.

ID: 11795d4d Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of the sweet potato in Polynesia. The text indicates that the sweet potato is found in Polynesia but originated in South America, and that the sweet potato was being cultivated by Native Hawaiians and other Indigenous peoples in Polynesia long before sea voyages between South America and Polynesia began. The text goes on to note that research by Muñoz-Rodríguez and colleagues has established that the Polynesian varieties of sweet potato split from South American varieties more than 100,000 years ago, which is thousands of years before humans settled in Polynesia. If Polynesian peoples were cultivating the sweet potato before sea voyages between Polynesia and South America began, and if Polynesian varieties of sweet potato diverged from South American varieties well before people were in Polynesia, it can reasonably be concluded that humans didn't play a role in bringing the sweet potato to Polynesia.

Choice A is incorrect. The text doesn't provide any information about when the sweet potato began to be cultivated in South America, so there's no support for the conclusion that cultivation began in Polynesia before it began in South America. Choice B is incorrect because the text indicates that the sweet potato was being cultivated in Polynesia long before sea journeys between Polynesia and South America began. Therefore, it wouldn't be reasonable to conclude that Polynesian peoples acquired the sweet potato from South American peoples. Additionally, the text indicates that the Polynesian varieties of sweet potato diverged from the South American varieties thousands of years before people settled in Polynesia, which suggests that the sweet potato was already present in Polynesia when people arrived. Choice D is incorrect because the text states that the domestic sweet potato, which is found in Polynesia, descends from a wild South American plant, not from a domesticated South American plant. The only people that the text describes as cultivating the sweet potato are Native Hawaiians and other Indigenous peoples of Polynesia.

Question Difficulty: Hard

Question ID 1ffaf9ec

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 1ffaf9ec

The Uto-Aztecan language family is divided into a northern branch, which includes the Shoshone language of present-day Idaho and Utah, and a southern one, whose best-known representative is Nahuatl, the language of the Aztec Empire in Mexico. Lexical similarities across the family, including of botanical terms, confirm descent from a single language spoken millennia ago, and the family's geographical distribution suggests an origin in what is now the US Southwest. However, vocabulary pertaining to maize isn't shared between northern and southern branches, despite the crop's universal cultivation among Uto-Aztecan tribes. Given archaeological evidence that maize originated in Mexico and diffused northward into what became the US Southwest, some linguists reason that _____

Which choice most logically completes the text?

A. northern Uto-Aztecan tribes likely obtained the crop directly from a southern Uto-Aztecan tribe rather than from a non-Uto-Aztecan tribe.

B. variation in maize-related vocabulary within each branch of the Uto-Aztecan family likely reflects regionally specific methods for cultivating the crop.

C. southern Uto-Aztecan tribes likely acquired maize at roughly the same time as northern Uto-Aztecan tribes did, though from different sources.

D. the family's division into northern and southern branches likely preceded the acquisition of the crop by the Uto-Aztecan tribes.

ID: 1ffaf9ec Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the discussion of Uto-Aztecan languages. The text explains that the northern and southern branches of the Uto-Aztecan language family descended from a single language (believed to have originated in what is now the US Southwest), resulting in similarities across the family's languages; however, the branches don't have similar vocabulary for maize, even though maize has been cultivated by all Uto-Aztecan tribes. The text also indicates that maize originated in Mexico and spread northward into what is now the US Southwest—the area where the Uto-Aztecan language family originated. It follows, then, that the language family had already divided into northern and southern branches before maize reached that area; if maize had been present before the division occurred, the family's origin language would have had terminology for it that likely would have been reflected in the branches, meaning they would have had similar vocabulary for maize. If maize arrived after the division occurred, however, the tribes in the two regions likely would have developed vocabulary pertaining to maize separately, at the times when they acquired the crop.

Choice A is incorrect because the text focuses on vocabulary pertaining to maize in the branches of the Uto-Aztecan language family, and referring only to how some Uto-Aztecan tribes obtained maize wouldn't directly address the role of language. Moreover, if northern Uto-Aztecan tribes had acquired maize from a southern Uto-Aztecan tribe, it's reasonable to assume that the northern tribes might have also picked up southern Uto-Aztecan terminology for maize in that exchange. Choice B is incorrect

because the text discusses the fact that the northern and southern branches of the Uto-Aztecan language family don't have shared vocabulary pertaining to maize, not the idea that there are variations in such vocabulary within each branch—that is, the text focuses on differences between the two branches, not on differences between languages within a branch. Choice C is incorrect because the text focuses on vocabulary pertaining to maize in the branches of the Uto-Aztecan language family, and referring only to the timing and source of maize acquisition wouldn't directly address the role of language. Furthermore, the text implies that southern Uto-Aztecan tribes probably acquired maize before the northern tribes did, given the evidence that maize originated in Mexico—the location of the best-known representative of the southern branch of the Uto-Aztecan language family—before spreading to the north.

Question Difficulty: Hard

Question ID 065a1aeb

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 065a1aeb

Sir Gawain and the Green Knight is a circa 1400 poem written in Middle English—an archaic form of the English spoken today. Over the last several centuries, the English language has undergone such transformations in vocabulary, spelling, and grammar that most readers now rely on translations to read *Sir Gawain*. In the introduction to his 2007 translation, Simon Armitage remarks that the sonic patterns of the poem, which was written in alliterative verse (a verse form featuring extensive repetition of initial consonant sounds), are essential to its structure. Because many Modern English words begin with different sounds than their Middle English equivalents do, a strictly literal translation of *Sir Gawain* would therefore likely _____

Which choice most logically completes the text?

A. preserve much of the original text's meaning at the expense of other qualities that are also integral to the experience of reading the poem.

B. appeal more to modern readers than would translations like Armitage's that instead prioritize the original text's sonic and structural qualities.

C. be more faithful to the original intentions of the poem than most strictly literal translations of alliterative Middle English poems are to their originals.

D. be preferable to modern readers who are primarily interested in learning what the poem reveals about historical conditions during the time it was originally written.

ID: 065a1aeb Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of translating *Sir Gawain and the Green Knight*. The text states that the poem was written in alliterative verse, a form that features extensive repetition of initial consonant sounds, and that, according to Armitage, the patterns of sound in the poem are essential to the poem's structure. The text also notes that many Modern English words begin with different sounds than their Middle English equivalents (that is, the words with the same meanings) do. This means that if a translator were to render the poem's Middle English words into their direct Modern English equivalents, the initial consonant sounds of many words would change and the original alliterative patterns wouldn't hold. It follows, then, that a strictly literal (word for word) translation would preserve much of the original text's meaning at the expense of sonic and structural qualities that are also integral to the experience of reading the poem.

Choice B is incorrect because the text doesn't address modern readers' preferences among translation approaches. Although the text implies that Armitage may have prioritized the sonic patterns and structure of the original poem in his translation, it doesn't give any indication that this approach would be less appealing to modern readers than an approach that directly translates the words but loses the original patterns of sounds in the poem. Choice C is incorrect. The text actually suggests that a strictly literal Modern English translation of *Sir Gawain and the Green Knight* wouldn't be especially faithful to the original intentions of the poem because the Modern English words would change the sonic patterns Armitage notes are essential to the alliterative poem's

structure—that is, such a translation would change patterns of sound that are a fundamental part of the original poem's composition. Moreover, there's no reason to think that a strictly literal translation of that poem would be more faithful to the original intentions than literal translations of other alliterative Middle English poems would be, since they would presumably all face the issue of a change in the patterns of sounds. Choice D is incorrect because the end of the text makes a point about sounds, not meaning. Modern readers interested in gathering historical information from the poem might prefer a strictly literal translation (one that directly translates the words without making additional changes), but that idea doesn't logically follow from the fact that many Modern English words start with different sounds than their Middle English counterparts; a change in the sounds wouldn't have any effect on the information the poem conveys.

Question Difficulty: Hard

Question ID 7b0622a8

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 7b0622a8

Geoglyphs are large-scale designs of lines or shapes created in a natural landscape. The Nazca Lines were created in the Nazca Desert in Peru by several Indigenous civilizations over a period of many centuries. Peruvian archaeologist Johny Isla specializes in these geoglyphs. At a German exhibit about the Nazca Lines, he saw an old photograph of a large geoglyph of a whalelike figure and was surprised that he didn't recognize it. Isla returned to Peru and used a drone to search a wide area, looking for the figure from the air. This approach suggests that Isla thought that if he hadn't already seen it, the whalelike geoglyph _____

Which choice most logically completes the text?

A. must represent a species of whale that went extinct before there were any people in Peru.

B. is actually located in Germany, not Peru, and isn't part of the Nazca Lines at all.

C. is probably in a location Isla hadn't ever come across while on the ground.

D. was almost certainly created a long time after the other Nazca Lines geoglyphs were created.

ID: 7b0622a8 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of Johny Isla and the whalelike geoglyph. The text indicates that the German exhibit about the Nazca Lines included a photograph showing a whalelike geoglyph that Isla hadn't known about before attending the exhibit, even though Isla "specializes in" Nazca Lines geoglyphs. Given his expertise, and his surprise at being unfamiliar with the whale glyph, the text strongly suggests that Isla believed he would have noticed the glyph if he had been to its location. Thus, the text implies that the whalelike geoglyph is likely in a location Isla had not previously been to.

Choice A is incorrect because the text doesn't address either the species of whale that the geoglyph is meant to represent or its relationship to the earliest humans in the area that is now Peru. Choice B is incorrect. Although the text indicates that the photograph of the whalelike geoglyph was on display at a "German exhibit," that exhibit was specifically "about the Nazca Lines," which the text indicates are located in Peru. Choice D is incorrect. Although the text does indicate that the glyphs were created "over a period of many centuries," the text doesn't address when in that period of time any particular glyphs were created.

Question Difficulty: Hard

Question ID b75c1c15

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: b75c1c15

Overgrazing by purple sea urchins has caused many kelp forests along North America's west coast to be replaced by urchin barrens—areas stripped of vegetation and covered in purple sea urchins. Urchins in barrens persist in a state of starvation that lessens their nutritional value—and thus their appeal—to many predators. Sarah Gravem and colleagues placed sunflower sea stars, a once-abundant predator species suffering massive population declines in recent years, in aquariums that each contained a nutritionally poor and a nutritionally rich purple sea urchin. The researchers found that the sea stars selected the nutritionally rich urchin in 42.7% of trials and the nutritionally poor urchin in 37.5% of trials, suggesting that _____

Which choice most logically completes the text?

A. sunflower sea stars are willing to hunt sea urchins, but if given a choice, they will prey on other more nutritious marine animals instead.

B. sunflower sea stars are reluctant to feed on both nutritionally poor and nutritionally rich sea urchins and are therefore unlikely to thrive in kelp forests.

C. sunflower sea stars are less likely to consume sea urchins in barrens than other species of sea stars are, putting sunflower sea stars at a high risk of extinction.

D. sunflower sea stars do not always avoid foraging on nutritionally poor sea urchins, making sunflower sea star population recovery a potentially important tool for controlling urchin barrens.

ID: b75c1c15 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it presents the conclusion that most logically follows from the text's discussion of the researchers' findings about purple sea urchins and sunflower sea stars. The text explains that urchin barrens are areas that used to be kelp forests but are now covered by purple sea urchins. The text suggests that because there is no more vegetation to be consumed in those areas, the urchins exist in a state of starvation that makes them less nutritional for many predators. The text goes on to explain that in a study with a choice between two purple sea urchins, sunflower sea stars (a predator species that has been substantially declining) consumed a nutritionally rich urchin 42.7% of the time and a nutritionally poor urchin 37.5% of the time. Because the sunflower sea stars didn't always avoid consuming nutritionally poor urchins, even when nutritionally rich ones were available, it follows that helping sunflower sea star populations to grow could help control urchin barrens by increasing the number of sea stars that may consume and thus remove nutritionally poor purple sea urchins from barrens.

Choice A is incorrect because the text indicates only that when presented with purple sea urchins, the sunflower sea stars in the study consumed both nutritionally rich and nutritionally poor ones. It doesn't suggest that sunflower sea stars generally prefer other marine animals that are more nutritious; there's no mention of other marine animals. Choice B is incorrect because the text doesn't suggest that sunflower sea stars are generally reluctant to feed on sea urchins. In fact, the text indicates that the sunflower sea stars in the study did consume sea urchins, feeding on both nutritionally poor and nutritionally rich ones. Choice C

is incorrect because the text addresses only the willingness of sunflower sea stars to consume the type of sea urchins found in barrens (nutritionally poor sea urchins), not how likely other species of sea stars are to consume them.

Question Difficulty: Hard

Question ID 4c109ce5

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 4c109ce5

Dutch painters in the sixteenth and seventeenth centuries often showed tables filled with large wheels of cheese or carved shards of butter. Some art historians, noting that dairy products were a major component of the Dutch diet, interpret these depictions as reflections of everyday Dutch eating habits. However, a group of researchers recently reviewed hundreds of food-related paintings and found that lemons—which could only be acquired in the Netherlands at great cost, since they had to be imported from warmer climates—feature in Dutch paintings of the period more than three times as frequently as dairy products do, thereby casting doubt on the idea that _____

Which choice most logically completes the text?

A. dairy products were a more significant component of the Dutch diet of the period than lemons were.

B. food was a more popular subject among Dutch painters than it was among painters from other countries at the time.

C. depictions of food in Dutch paintings of the period should be taken as realistic representations of Dutch eating habits.

D. Dutch painters of the period may have depicted foods for symbolic reasons rather than to show what Dutch people typically ate.

ID: 4c109ce5 Answer

Correct Answer: C

Rationale

Choice C is the best answer. The text tells us that lemons—an expensive imported product—feature in Dutch paintings of the period more frequently than dairy products do. Since it's unlikely lemons were eaten more often than dairy, this fact casts doubt on the theory that these paintings realistically depicted Dutch diets.

Choice A is incorrect. In fact, the text suggests the opposite: it says that dairy products were a "major component of the Dutch diet," while lemons were an expensive import item, so we can infer that lemons were eaten much more rarely than dairy products. Choice B is incorrect. The passage doesn't mention painters from other countries, so there's no basis to make this inference. Choice D is incorrect. In fact, the text suggests that Dutch painters do have reasons for depicting foods other than to show what Dutch people typically ate. For example, lemons in a painting could indicate wealth or prosperity.

Question Difficulty: Hard

Question ID 83ce3b6c

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 83ce3b6c

If some artifacts recovered from excavations of the settlement of Kuulo Kataa, in modern Ghana, date from the thirteenth century CE, that may lend credence to claims that the settlement was founded before or around that time. There is other evidence, however, strongly supporting a fourteenth century CE founding date for Kuulo Kataa. If both the artifact dates and the fourteenth century CE founding date are correct, that would imply that _____

Which choice most logically completes the text?

A. artifacts from the fourteenth century CE are more commonly recovered than are artifacts from the thirteenth century CE.

B. the artifacts originated elsewhere and eventually reached Kuulo Kataa through trade or migration.

C. Kuulo Kataa was founded by people from a different region than had previously been assumed.

D. excavations at Kuulo Kataa may have inadvertently damaged some artifacts dating to the fourteenth century CE.

ID: 83ce3b6c Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of artifacts and Kuulo Kataa's founding date. If it were true both that Kuulo Kataa was founded in the fourteenth century CE and that artifacts found in excavations of the settlement are from the thirteenth century CE, it would be reasonable to conclude that the artifacts weren't created in the Kuulo Kataa settlement. That would suggest, then, that the artifacts originated somewhere else and eventually reached the settlement through trading or as people migrated.

Choice A is incorrect because the existence of thirteenth-century CE artifacts recovered during excavations of a settlement founded in the fourteenth century CE isn't logically connected to artifacts from one century being more commonly recovered than artifacts from another century. Rather than suggesting anything about how frequently artifacts from different times are found, the existence of artifacts confirmed as predating the settlement's founding suggests that those items arrived in Kuulo Kataa during or after its establishment. Choice C is incorrect because the text focuses on time periods and says nothing about which region the founders of Kuulo Kataa have been thought to come from; similarly, the text doesn't suggest anything about where the thirteenth-century CE artifacts originated other than not from Kuulo Kataa. Therefore, it isn't logical to conclude that the mere existence of artifacts confirmed as predating the Kuulo Kataa settlement suggests that the founders of the settlement came from a particular region other than one previously assumed. Choice D is incorrect because the existence of artifacts from the thirteenth century CE at a site dated to the fourteenth century CE doesn't imply that fourteenth-century objects were damaged during excavations. There's nothing in the text to suggest that any objects were damaged; rather, the existence of artifacts confirmed as predating the settlement's founding suggests that those items were brought to Kuulo Kataa during or after its establishment.

Question Difficulty: Hard

Question ID bc2bfb8f

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: bc2bfb8f

Scientists studying Mars long thought the history of its crust was relatively simple. One reason for this is that geologic and climate data collected by a spacecraft showed that the crust was largely composed of basalt, likely as a result of intense volcanic activity that brought about a magma ocean, which then cooled to form the planet's surface. A study led by Valerie Payré focused on additional information—further analysis of data collected by the spacecraft and infrared wavelengths detected from Mars's surface—that revealed the presence of surprisingly high concentrations of silica in certain regions on Mars. Since a planetary surface that formed in a mostly basaltic environment would be unlikely to contain large amounts of silica, Payré concluded that _____

Which choice most logically completes the text?

A. the information about silica concentrations collected by the spacecraft is likely more reliable than the silica information gleaned from infrared wavelengths detected from Mars's surface.

B. high silica concentrations on Mars likely formed from a different process than that which formed the crusts of other planets.

C. having a clearer understanding of the composition of Mars's crust and the processes by which it formed will provide more insight into how Earth's crust formed.

D. Mars's crust likely formed as a result of other major geological events in addition to the cooling of a magma ocean.

ID: bc2bfb8f Answer

Correct Answer: D

Rationale

Choice D is the best answer. Cooling magma would create basalt, but "a planetary surface that formed in a mostly basaltic environment would be unlikely to contain large amounts of silica." Since Mars's crust does contain large amounts of silica, it is unlikely that Mars's crust was formed exclusively by cooling magma. Therefore, there were likely other major geological events that created the high silica concentrations.

Choice A is incorrect. Although the passage discusses these two methods of collecting data about Mars's crust, it never compares their reliability, so there's no basis for this inference. Choice B is incorrect. The passage never mentions anything about the crusts of other planets, so there's no basis for this inference. Choice C is incorrect. The passage never mentions Earth's crust, so there's no basis for this inference.

Question Difficulty: Hard

Question ID f398da43

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: f398da43

Belonging to neither the minimalist nor the abstract art movements but heavily influencing both, Constantin Brâncuşi spent his sculpting career returning to the same few themes—a kiss, a sleeping head, and a bird in flight—each rendered in pristine, simple, almost abstract forms. Perhaps the most famous example is *Bird in Space* (1923), a tall, slender bronze sculpture that arcs upward in a manner suggestive of flight but that otherwise lacks any identifiable characteristics of a bird. Despite the seeming simplicity of his works, the exacting standards to which Brâncuşi held his work meant that he produced relatively few pieces over his career. There is thus something of a disparity between _____

Which choice most logically completes the text?

A. the nature of much of Brâncuşi's work and the abstraction of *Bird in Space*.

B. Brâncuşi's relatively limited productivity and the diversity of his sculptures.

C. the themes Brâncuşi explored and the themes favored by artists he inspired.

D. Brâncuşi's importance to the history of art and his total artistic output.

ID: f398da43 Answer

Correct Answer: D

Rationale

Choice D is the best answer because it most logically completes the text's discussion of the sculptor Constantin Brâncuşi. The text establishes Brâncuşi's significance by noting that although he belonged to neither the minimalist nor the abstract art movements, he heavily influenced both—a detail that signals his importance to the history of art. At the same time, the text notes that the exacting standards to which Brâncuşi held his work meant that he produced relatively few pieces over his career. Because the text presents both Brâncuşi's major artistic influence and his limited output, it is reasonable to infer that the disparity the text identifies is between his importance to the history of art and his total artistic output.

Choice A is incorrect because the text explicitly identifies Brâncuşi's *Bird in Space* as "a famous example" of how the artist conveyed his preferred themes—in this case, a bird in flight—through simplicity bordering on abstraction. Thus, this particular sculpture is consistent with the nature of much of Brâncuşi's work instead of showing a disparity, or marked difference, with it. Choice B is incorrect because the text indicates that Brâncuşi returned to the same few themes, suggesting limited thematic diversity. Since his productivity and his thematic diversity were both limited, these two aspects of Brâncuşi's work are consistent with each other instead of showing a disparity, or a marked difference. Choice C is incorrect because although the text mentions that Brâncuşi heavily influenced both the minimalist and abstract art movements, it doesn't discuss the specific themes favored by artists in those movements. There is therefore no basis for identifying a disparity between Brâncuşi's themes and those of artists he inspired.

Question Difficulty: Hard

Question ID e3bfff98

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: e3bfff98

As juveniles, all white-necked jacobin hummingbirds display vibrantly blue head plumage; when they enter adulthood, males retain these blue feathers and most females molt to a drab green hue. However, 28% of adult female jacobins remain identical in coloration to juveniles and adult males. Based on field observations in Panama, a team of researchers reports that while adult males show a clear preference in mate selection for adult females with drab green feathers, they also engage in more antagonistic behavior toward those adult females than toward blue-feathered adult females when competing for resources. Therefore, the team hypothesizes that _____

Which choice most logically completes the text?

A. adult male jacobins do not act antagonistically toward juvenile jacobins with blue head plumage when competing for resources.

B. the percentage of blue-feathered females will increase until fewer than half of adult female jacobins are green-feathered.

C. the occurrence of blue head plumage in adult female jacobins is driven by one or more factors not associated with mate attraction.

D. coloration prevents green-feathered adult female jacobins from distinguishing between adult males and blue-feathered adult females.

ID: e3bfff98 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text's discussion of researchers' observations of white-necked jacobin hummingbird females that retain blue head plumage into adulthood. The text indicates that even though adult males show a clear preference in mate selection for adult females with drab green feathers, a significant percentage of adult females (28%) retain blue head plumage. Critically, the text also notes that the mating advantage conferred on adult females by green head plumage is offset by the fact that when competing for resources, adult males behave more antagonistically toward green-feathered adult females than toward blue-feathered ones. Given this discrepancy in the males' behavior, it is reasonable to hypothesize that the occurrence of blue head plumage in adult females is driven by factors not associated with mate attraction—specifically, reduced antagonism during resource competition.

Choice A is incorrect because the antagonistic behavior discussed in the text is that displayed by adult male jacobins toward blue-feathered and green-feathered adult females, not toward juveniles. The text doesn't discuss the behavior of adult males toward juveniles. Choice B is incorrect. Although the text cites the current percentage (28%) of female white-necked jacobin hummingbirds that retain blue plumage into adulthood, it doesn't make predictions about future changes in the proportion of blue to green plumage in this species or provide information supporting such a prediction. Choice D is incorrect because the text doesn't discuss the perceptual abilities of green-feathered adult females or whether they can distinguish between adult males and

blue-feathered adult females. Instead, the text focuses on adult male behavior—namely, mate selection and antagonism toward adult females.

Question Difficulty: Hard

Question ID 72ee1548

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 72ee1548

A social species, chickens will cry out to one another in warning if they sense a hawk or other predator nearby. But if alone, a chicken will remain silent so as not to attract the predator's attention. Sonja Hillemacher decided to use this behavior to determine whether individual chickens possess a capacity to recognize themselves visually when reflected in a mirror (a common standard for animal intelligence). In the first condition of her study, the subject could see its reflection, but no other chickens were present. In a second condition, another chicken was visible to the subject. Hillemacher presented an image of a hawk to the subject in both conditions, reasoning that if chickens lacked a capacity for visual self-recognition, then _____

Which choice most logically completes the text?

A. neither study condition would elicit an audible response from the subject.

B. the subject likely would cry out a warning in both study conditions.

C. only the first study condition would elicit an audible response from the subject.

D. the subject would fail to distinguish its reflection from the image of the hawk.

ID: 72ee1548 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of Hillemacher's study of visual self-recognition in chickens. According to the text, when a predator is nearby, chickens cry out in warning if another chicken is present but remain silent if alone to avoid attracting the predator's attention. The text explains that Hillemacher set up one condition in which a subject was alone and could see its reflection in a mirror and another condition in which the subject could see another chicken, and then presented an image of a hawk (a predator). It follows that if chickens aren't capable of recognizing themselves visually in a mirror, the subject likely would cry out a warning in both conditions; in the first condition because it would perceive its reflection as another chicken—that is, it would think another chicken is present—and in the second condition because it would see that another chicken is actually present.

Choice A is incorrect because the text suggests that regardless of chickens' ability to visually recognize themselves in mirrors, the subject in the second condition would cry out a warning because another chicken is actually present. Further, if chickens do lack visual self-recognition, the subject in the first condition likely would also cry out because it would think its reflection is another chicken. Choice C is incorrect. The text does suggest that if chickens lack the ability to visually recognize themselves in mirrors, the subject would cry out a warning in the first condition because it would think its reflection is another chicken. However, the text also indicates that regardless of their capacity of self-recognition, chickens cry out a warning when other chickens are present, and another chicken is present in the second condition. Therefore, both conditions—not just the first one—likely would elicit an audible response from the subject. Choice D is incorrect because the text indicates that the study was focused on determining whether chickens recognize themselves visually in a mirror or instead perceive their reflections as other chickens; there's no suggestion that a lack of self-recognition would cause a chicken to confuse its reflection with the image of a hawk.

Question Difficulty: Hard

Question ID 1882a7bb

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 1882a7bb

Microbial fuel cells (MFCs) capitalize on the ability of some species of bacteria to oxidize organic matter and transfer electrons extracellularly. The bacteria form a dense biofilm on the surface of an electron-collecting anode, but moving the electrons from the bacterial cytoplasm to an external electrode requires that the electrons pass through a series of inefficient oxidation-reduction (redox) reactions. Accordingly, MFC power output rarely exceeds a density of 0.30 milliwatts per square centimeter (mW/cm^2). In an experiment, researchers added silver nanoparticles to carbon paper covering the anode in an MFC. The resulting power density was 0.66 mW/cm^2. Since metals such as silver exhibit high electrical conductivity, the researchers hypothesized that _____

Which choice most logically completes the text?

A. silver nanoparticles may allow electrons to bypass the series of redox reactions and transfer directly to the electrode.

B. electrons may be conducted directly to the electrode before the silver nanoparticles catalyze the redox reactions.

C. silver nanoparticles may increase the metabolic processes of the bacteria, thereby increasing the number of free electrons available to transfer to the electrode.

D. as the density of the biofilm increases, the series of redox reactions may accelerate independent of the presence of the silver nanoparticles.

ID: 1882a7bb Answer

Correct Answer: A

Rationale

Choice A is the best answer because it most logically completes the text's discussion of microbial fuel cells (MFCs) and the effect of silver nanoparticles on power output. The text explains that in MFCs, electrons are transferred from the bacterial cytoplasm to an external electrode through a series of inefficient redox reactions, which typically prevent power output from exceeding 0.30 mW/cm^2. When researchers added silver nanoparticles to carbon paper covering the anode, power density more than doubled to 0.66 mW/cm^2. Critically, the text notes that metals such as silver exhibit high electrical conductivity. Given that the inefficiency of the redox reactions accounted for the limited power output of MFCs and that the addition of a highly conductive material dramatically increased that output, it is reasonable to hypothesize that the silver nanoparticles allowed electrons to bypass the redox reactions and transfer directly to the electrode.

Choice B is incorrect because the researchers' hypothesis, as set up by the last sentence of the text, is specifically grounded in the high electrical conductivity of metals such as silver. Nothing in the text supports the idea that the silver nanoparticles function as catalysts for the redox reactions, nor does the text suggest that electrons are being conducted to the electrode independently of any role played by the silver nanoparticles. The text points to the conductivity of silver as the explanation for the increased power density, not to any catalytic effect of the nanoparticles on the existing redox reactions. Choice C is incorrect because the text never discusses the metabolic processes of the bacteria in the biofilm coating the electron-collecting anodes, nor is there any suggestion that the high conductivity of silver nanoparticles would interact with the bacteria's metabolism in any way. Choice D is incorrect because the text never suggests that in the experiment, the biofilm on the electron-collecting anodes varied in density.

Moreover, the hypothetical statement begun in the last sentence of the text concerns the high electrical conductivity of metals such as silver. Thus, proposing that redox reactions—which, as the text establishes, conduct electricity—accelerated independently of a conductive metallic material (the silver nanoparticles) wouldn't logically complete that hypothesis.

Question Difficulty: Hard

Question ID 03d9c538

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 03d9c538

Mosses can struggle in harsh desert conditions because these plants require enough sunlight for photosynthesis but not so much that they risk drying out. Researchers Jenna Ekwealor and Kirsten M. Fisher found several species of *Syntrichia caninervis*, a type of desert moss, growing under quartz crystals in California's Mojave Desert. To evaluate whether these semitransparent rocks benefited the moss, the researchers compared the shoot tissue, a measure of plant growth, of *S. caninervis* when growing on the soil surface versus when the moss was growing under the quartz rocks. They found that the shoot tissue was 62% longer for moss growing under the quartz as compared to moss on the soil surface, suggesting that _____

Which choice most logically completes the text?

A. *S. caninervis* is one of the few types of moss that can survive under semitransparent rocks.

B. quartz crystals do not transmit the necessary sunlight for photosynthesis in *S. caninervis*.

C. *S. caninervis* growing under quartz crystals experience lower light intensity and are thus able to retain more moisture.

D. quartz crystals are capable of supporting *S. caninervis* growth if the crystals are not too thin.

ID: 03d9c538 Answer

Correct Answer: C

Rationale

Choice C is the best answer because it most logically completes the text. The text explains that while desert moss species need sufficient sunlight for photosynthesis, exposure to sunlight can also affect the plants negatively by drying them out. Ekwealor and Fisher's team found specimens of *S. caninervis* moss growing under quartz crystals that were semitransparent, allowing some but not all sunlight to pass through them, and the shoot tissue of these specimens was longer than that of *S. caninervis* specimens found growing on the surface that were unprotected by such crystals. Since, as the text explains, the length of shoot tissue is an indicator of plant growth, and since greater exposure to sunlight results in greater loss of moisture, it can be inferred that *S. caninervis* growing under quartz crystals experience lower light intensity and are thus able to retain more moisture.

Choice A is incorrect because the text doesn't mention another moss species besides *S. caninervis* or discuss whether other such species are able to grow under transparent crystals, as *S. caninervis* is. Choice B is incorrect because, as the text explains, specimens of *S. caninervis* were found growing under quartz crystals and exhibited more plant growth than specimens growing on the soil surface. This wouldn't have been the case if the crystals transmitted insufficient light for the moss's photosynthesis. Choice D is incorrect. The text contrasts the growth of *S. caninervis* specimens found beneath semitransparent quartz crystals with that of specimens found on the soil surface absent such crystals, but it doesn't make a comparison among specimens growing beneath crystals of different degrees of thickness or consider how the relative thickness of the crystals affects the growth of the moss.

Question Difficulty: Hard

Question ID 380560ba

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: 380560ba

In a three-year study of parasitic infections by *Anomotaenia brevis* tapeworms in *Temnothorax nylanderi* ants, entomologist Susanne Foitzik and colleagues found something unexpected: rather than reducing its host's fitness, as is typical of parasites, *A. brevis* greatly extends the lifespan of a *T. nylanderi* worker ant and seems to halt the effects of aging. Furthermore, those infected receive special treatment, ceasing their share of labor to sustain the colony and remaining in the nest as uninfected workers feed, groom, and transport them. By contrast, the researchers observed that uninfected workers in parasitized colonies have shortened lifespans, most likely because the _____

Which choice most logically completes the text?

A. uninfected workers are at high risk for direct exposure to *A. brevis* in the course of providing social care to the infected workers in the nest.

B. need to compensate for reduced contributions within the colony while also caring for infected workers is burdensome to the uninfected workers.

C. high level of activity maintained by the uninfected workers makes them better able than infected workers to quickly disperse when the nest is attacked by a predator.

D. average lifespan of *T. nylanderi* worker ants in colonies without parasitic activity typically falls well below three years, the range covered by the study.

ID: 380560ba Answer

Correct Answer: B

Rationale

Choice B is the best answer. The text describes a study examining the relationship between a species of parasitic tapeworm, *A. brevis*, and its host insect, the *T. nylanderi* ant. According to the text, researchers were surprised to find that the tapeworm extends the life of its ant host, rather than reducing it. The text goes on to state that the infected ants end up doing less work to sustain the colony and that as a result, the uninfected ants take on the infected ants' share of labor in addition to caring for them in their infected state. The study's researchers also observed that the uninfected ants have shorter lifespans than expected. If the infected ants, who are doing less work in the colony, have longer lifespans, it can be inferred that the less an ant works, the longer it will live. The opposite of this statement can also be inferred: the more an ant works, the shorter its life. So, since the workload within the colony is being redistributed so that the infected ants work less while the uninfected ants work more (as they take on the neglected duties of the infected ants and also care for those ants), then it can be inferred that the lifespans of the uninfected ants are shortened because the need to compensate for reduced contributions within the colony while also caring for infected workers is burdensome to the uninfected workers.

Choice A is incorrect because the text does not indicate how *A. brevis* is transmitted to the ants or assert that uninfected ants are more likely to be directly exposed to *A. brevis* while caring for infected ants. Choice C is incorrect because the text makes no mention of the relative abilities of infected and uninfected ants to escape predators: in fact, predators are not mentioned in the

text at all. Choice D is incorrect because the text does not supply any information about the average lifespans of the ants in colonies without parasitic activity; the text only indicates factors that lengthen and shorten the lifespans of ants in parasitized colonies.

Question Difficulty: Hard

Question ID fb529162

Assessment	Test	Domain	Skill	Difficulty
SAT	Reading and Writing	Information and Ideas	Inferences	

ID: fb529162

Volunteering, or giving time for a community service for free, is a valuable form of civic engagement because helping in a community is also good for society as a whole. In a survey of youths in the United States, most young people said that they believe volunteering is a way to help people on an individual level. Meanwhile, only 6% of the youths said that they think volunteering is a way to help fix problems in society overall. These replies suggest that _____

Which choice most logically completes the text?

A. many young people think they can volunteer only within their own communities.

B. volunteering may be even more helpful than many young people think it is.

C. volunteering can help society overall more than it can help individual people.

D. many young people may not know how to find ways to volunteer their time.

ID: fb529162 Answer

Correct Answer: B

Rationale

Choice B is the best answer because it most logically completes the text's discussion of volunteering. The text asserts that volunteering benefits both the community in which one volunteers and society as a whole. It then states that in a survey of young people, a majority of respondents said that volunteering helps individuals, but only 6% of respondents said that volunteering helps society as a whole. If volunteering does in fact help society as a whole, as the text says, but only 6% of young people believe it does, then it's reasonable to conclude that volunteering is more helpful than many young people think it is.

Choice A is incorrect because the text discusses young people's beliefs about the benefits of volunteering, not where young people believe they are able to volunteer. Nothing in the text suggests that many young people believe they are only able to volunteer in their own communities. Choice C is incorrect. Although the text indicates that volunteering is beneficial for society as a whole, nothing in the text suggests that volunteering can benefit society more than it can benefit individual people. The text doesn't compare the benefits to society with the benefits to individuals. Choice D is incorrect because the text discusses young people's beliefs about the benefits of volunteering, not how to find volunteering opportunities. There's nothing in the text to suggest that many young people don't know how to volunteer.

Question Difficulty: Hard