Giant Pandas: Endangered

Giant pandas are one of the most endangered species on the planet. The constant threat against their natural habitat coupled with their low birthrates keeps them in persistent peril of extinction. Although there have been many efforts to protect pandas and their habitat, future conservation projects must do more than just attempt preservation of the species: they must address the causes that endanger the panda population in the first place.

Giant pandas are native only to the forests of central China, and China’s rapidly expanding economy has had a tremendously negative impact on the panda’s natural habitat. Increased agricultural production, growing demands for lumber and fuel wood, and extensive road construction have all contributed to the destruction of the forests. These human activities not only decimate the panda’s habitat, but they also disconnect panda populations from one another. Isolating groups of pandas in this fashion causes a dramatic increase in inbreeding, which can cause birth defects, reduced resistance to disease, and an inability to adapt to environmental stressors. Ironically, at a time when pandas most need to adapt to a changing environment, they are losing the very ability that might help them cope with these environmental stressors.

China’s expansion has also threatened sources of food and shelter for the panda. Giant pandas thrive in areas with abundant land cover and a plentiful supply of bamboo, the plant that provides 99% of their diet. Logging has severely depleted the bamboo forests that meet the panda’s needs for both diet and shelter. In the Sichuan province alone, the giant panda’s bamboo-filled habitat decreased by 50% in just 15 years due to timber logging.

The threat to the giant panda population has led China to implement a variety of conservation measures, although none have been entirely successful. The Chinese government has worked with the World Wildlife Fund (WWF) to create more than 40 nature reserves scattered throughout the country. In addition, the WWF has also established "green corridors" to connect isolated panda populations, offer mating opportunities, and provide access to large amounts of bamboo. While these programs have been successful in preserving the current habitat, they have not been able to significantly reverse any of the habitat degradation. Although the Chinese government has established programs to protect natural forests from being cleared for logging or agricultural projects, it has not done enough to restore the areas already scarred by these practices.

Another method used to bolster the giant panda population is breeding in captivity. This method has met with success, but there are drawbacks. Giant pandas breed relatively infrequently in captivity, and often produce as few as one offspring every two years. Female pandas seldom mate; some scientists estimate that females are fertile for as little as two to three days each year. Although recent innovations have led to an increase in captive panda births, this success might not offer any benefits to the wild panda population. When released into the wild, captive-born pandas have difficulty mating with others and tend to die young. Therefore, pandas bred in captivity do not help in the effort to prevent inbreeding. Furthermore, because the natural panda habitat has suffered such severe degradation, many zoologists contend that China’s forests simply cannot support the introduction of additional pandas.

Encouraging captive births and preventing further destruction to the panda’s habitat are important endeavors, but they do not solve the major problems threatening the panda population. The giant
panda’s habitat does not merely need to be protected; it must also be expanded, developed, and sustained. If conservation efforts are successful, then the number of pandas living in the wild will increase. This increase is only beneficial, however, if the growing population of pandas has a sustainable place to live, eat, and breed.

1) The author apparently believes that current panda conservation efforts are
   A. a cause of more harm than good
   B. harmful to the economic growth of China
   C. relatively nonexistent
   D. at risk of being eliminated
   E. admirable but insufficient

2) According to the passage, isolating panda populations from each other is harmful because
   A. isolated pandas have shorter life expectancies
   B. isolated pandas have difficulty fighting off predators
   C. disconnecting groups of pandas from each other forces them to compete for the declining bamboo supply
   D. disconnecting groups of pandas from each other reduces their mating options, causing reproductive problems
   E. disconnecting groups of pandas from each other makes them breed less frequently

3) As used in paragraph 2, which is the best synonym for decimate?
   A. manipulate
   B. expand
   C. demolish
   D. contaminate
   E. infiltrate

4) In paragraph 5, the author argues that captive breeding programs do not significantly benefit wild panda populations because
   I. recent innovations to help pandas in captivity breed more frequently have come too late to be useful in increasing the wild panda population
   II. the current state of the wild pandas’ habitat cannot support a large influx of released captive pandas
   III. captive-bred pandas do not significantly improve the genetic diversity or the quantity of wild panda offspring
   A. I only
   B. II only
   C. I and II only
5) The author's tone in the final paragraph can best be described as

A. emphatic, meaning forceful or insistent
B. despondent, meaning hopeless
C. irate, meaning very angry
D. impartial, meaning unbiased or neutral
E. cagey, meaning wary or guarded

6) Which of the following pieces of information, if added to the passage, would best strengthen the author's argument that current conservation efforts are not sufficient to reverse the damage that has already been done to the panda population?

A. Pandas are also threatened by poachers who hunt the animals for their prized fur.
B. When introduced into wild populations, pandas bred in captivity are often shunned by others.
C. Pandas are by far the most expensive animal for zoos to maintain.
D. The Chinese government has instituted a program encouraging local citizens to help replant bamboo forests.
E. Pandas bred in captivity have longer life spans than pandas born in the wild.

7) Using your own words, explain the drawbacks to breeding pandas in captivity.
Answers and Explanations

1) E  
Core Standard: Integration of Knowledge

In paragraph 1, the author states, “Although there have been many efforts to protect pandas and their habitat, future conservation projects must do more than just attempt preservation of the species: they must address the causes that endanger the panda population in the first place.” This tells us that the author believes that current efforts to help pandas are important, but ultimately fall short of finding real solutions. In the final paragraph, the author reiterates this idea: “Encouraging captive births and preventing further destruction to the panda’s habitat are important endeavors, but they do not solve the major problems threatening the panda population.” The author appreciates current conservation practices but believes that more is required to reverse the damage already done to panda populations and their habitat. This means that the author believes the current efforts are admirable but insufficient. Therefore (E) is correct.

The passage does not provide information to support choices (A), (B), (C), and (D). Therefore they are incorrect.

2) D  
Core Standard: Key Ideas and Details

To answer this detail question correctly, we need to find where the author discusses harm done to pandas—or more specifically, how isolating panda populations from each other is harmful—in the passage. A good way to do this is to scan the topic sentence of each paragraph, since this sentence will likely tell us what information can be found in the rest of that paragraph. The topic sentence of paragraph 2 reads: “Giant pandas are native only to the forests of central China, and China’s rapidly expanding economy has had a tremendously negative impact on the panda’s natural habitat.” Given that this sentence mentions the negative impact on the panda’s natural habitat, we can infer that the details we are looking for can likely be found in paragraph 2.

In paragraph 2, we learn that agricultural, logging, and construction projects have isolated pandas from each other. The author describes the consequences of this isolation: “Isolating groups of pandas in this fashion causes a dramatic increase in inbreeding, which can cause birth defects, reduced resistance to disease, and an inability to adapt to environmental stressors.” Inbreeding means the mating of two parents who are closely related genetically. The problems of inbreeding include birth defects and reduced resistance to disease, both of which could be considered reproductive problems. Even if the reader is uncertain about the meaning of inbreeding, he or she could determine that breeding and birth defects are related to mating and reproduction and arrive at the correct answer that way. Therefore (D) is correct.

The passage does not provide information to support choices (A) and (B). Therefore they are incorrect.

Although the author does state that the declining bamboo supply is a problem for pandas, he or she does not state that isolating groups of pandas forces them to compete for the remaining bamboo. While this could be true, the passage does not definitively support this inference, so (C) is incorrect.
In paragraph 5, the author states that “giant pandas breed relatively infrequently in captivity,” but he or she does not suggest that this is a consequence of isolating panda populations in the wild. This means (E) is incorrect.

3) C
Core Standard: Craft and Structure

decimate (verb): to reduce drastically in number; to cause great destruction or harm.

In paragraph 2, the author writes that there has been a “tremendously negative impact on the panda’s natural habitat.” He or she claims that many factors have “contributed to the destruction of the forests. These human activities not only decimate the panda’s habitat, but they also isolate pandas from one another.” The human activities have destroyed the forests, which are the panda’s natural habitat, so we can understand that decimate means destroy or demolish. Therefore (C) is correct.

Manipulate means to manage or influence skillfully, especially in an unfair manner. Destroying forests is much more extreme than just manipulating them, so (A) is incorrect.

Expand means to make larger. We can infer that the destruction of the forests makes them smaller, not larger, so (B) is incorrect.

Contaminate means to pollute or infect. Although contaminating forests would be one way to destroy them, evidence from the passage tells us that the forests are being cut down for timber rather than polluted. This means (D) is not the best choice.

Infiltrate means to move into or permeate, especially with hostile intent. Although this can be a negative action, it is not as extreme as destroying something. This eliminates (E).

4) D
Core Standard: Key Ideas and Details

In paragraph 5, the author claims, “Although recent innovations have led to an increase in captive panda births, this success might not offer any benefits to the wild panda population.” He or she continues to explain that this is because pandas bred in captivity tend to “have difficulty mating with others” and “die young.” The author does not suggest that the recent innovations have come too late, but rather that an increase in the number of pandas bred in captivity does not translate to an increase in the number of wild pandas. This eliminates option (I).

In paragraph 5, the author states that “many zoologists contend that China’s forests simply cannot support the introduction of additional pandas.” This supports option (II).
In paragraph 5, the author states, “When released into the wild, captive-born pandas have difficulty mating with others and tend to die young. Therefore, pandas bred in captivity do not help in the effort to prevent inbreeding.” Since pandas bred in captivity do not mate successfully with wild pandas, and thus do not help to curb inbreeding, this means that captive-bred pandas do not significantly improve the genetic diversity or the quantity of wild panda offspring. This supports option (III).

Therefore (D) is correct.

5) A
Core Standard: Key Ideas and Details

In the final paragraph, the author is intent on making the point that more must be done to address the problems threatening giant pandas. He or she makes strong, unequivocal statements, such as “The giant panda habitat does not merely need to be protected; it must also be expanded, developed, and sustained” and “If conservation efforts are successful, then the number of pandas living in the wild will increase.” Based on these forceful statements and the author’s persuasive tone, we can describe the author’s tone as emphatic, meaning forceful or insistent. Therefore (A) is correct.

Although the author is concerned about the future of the pandas, he or she does not express despondency in the final paragraph so much as urgency and clarity about what needs to be done. This means (B) is incorrect.

An irate tone conveys anger or fury. The author, though full of conviction, does not express anger. This makes (C) incorrect.

An impartial tone conveys a balanced, neutral point of view. The author expresses a clear position about the topic and aims to persuade readers to agree with his or her position. Therefore (D) is incorrect.

A cagey tone conveys wariness or guardedness. The author is not guarded about what needs to be done to help the giant panda; he or she is emphatic, which is the opposite of cautious. This means (E) is incorrect.

6) B
Core Standard: Integration of Knowledge

In paragraph 5, the author states that one of these efforts is to increase the number of pandas bred in captivity. However, increasing the number of pandas bred in captivity does not have much of an impact on wild panda populations, because these captive-born pandas “have difficulty mating with others and tend to die young.” A detail about captive-born pandas being shunned by wild pandas lends further credibility to the author’s point that captive breeding programs do not make a significant
impact on wild panda populations. This point directly supports the author’s argument that current conservation efforts are not sufficient to reverse the damage that has already been done to the panda population. Therefore (B) is correct.

The fact that pandas are also threatened by poachers supports the idea that pandas are endangered, but that is not the author’s argument in the passage. This eliminates (A).

The fact that pandas are the most expensive animal for zoos to maintain is irrelevant to the author’s argument, so (C) is incorrect.

A program that encourages local residents to replant bamboo forests supports the idea that there are current conservation efforts, but the author’s overall argument is that these efforts are insufficient in rebuilding the panda’s habitat. Since a program to replant bamboo forests would address the need to rebuild the panda’s habitat, this information would contradict the author’s overall argument. This means (D) is incorrect.

The life span of pandas bred in captivity is irrelevant to the author’s argument, so (E) is incorrect.