

SAT Practice Test 2: Answers & Explanations

Reading Test



1. (D)	6. (C)	11. (C)	16. (D)	21. (B)	26. (D)	31. (D)	36. (B)	41. (D)	46. (A)	51. (D)
2. (B)	7. (C)	12. (B)	17. (A)	22. (D)	27. (B)	32. (A)	37. (D)	42. (B)	47... (C)	52. (D)
3. (C)	8. (A)	13. (D)	18. (B)	23. (C)	28. (B)	33. (B)	38. (A)	43. (B)	48. (A)	
4. (B)	9. (B)	14. (A)	19. (A)	24. (A)	29. (C)	34. (C)	39. (B)	44. (D)	49. (A)	
5. (D)	10. (B)	15. (B)	20. (A)	25. (C)	30. (A)	35. (D)	40. (D)	45. (A)	50. (A)	

ANSWER KEY - TEST 2

1) **➡ D**

Concept(s) Tested: Words in Context

The word "operation" refers to the process of dipping the brush in the whitewash and painting the fence, which Tom repeats over and over, so (D) is correct. Choice (A), "venture," does not refer to a process; it is a risky adventure or journey. Choice (B), "maneuver," refers to a carefully executed series of movements; the word implies a level of skill that does not fit the context of painting the fence as well as "operation" and "process" do. Choice (C) is incorrect because Tom is not giving a performance for anyone by painting the fence; he is simply going about his work for the day.

2) **➡ B**

Concept(s) Tested: Summary

The author speaks of the "far-reaching continent" of fence that Tom is required to paint. The author also speaks of life being "hollow" and a "burden" for Tom. These are exaggerations meant to convey Tom's child-like discouragement at having to paint such a large fence. (B) is correct because "hyperbole" refers to exaggerated speech or writing. (A) is incorrect because there is no evidence that Tom was tricked into painting the fence. In fact, the passage later reveals that Tom tricks another into painting the fence for him. (C) is incorrect because, although it is true that the job is simple and that Tom is negative, the answer choice implies a note of judgment; the author, in contrast, simply conveys Tom's childish feelings, creating ironic humor as a result. (D) is incorrect because it is *too* hyperbolic; Tom's attitude does not extend to thinking of himself as a hero.

3) **➡ C**

Concept(s) Tested: Citation

In lines 8 – 9, the author writes that life seems "hollow" to Tom and existence a "burden." These terms are meant to convey the depth of Tom's

discouragement at having to paint the fence by using hyperbole. Thus, (C) is correct. Choice (A) is incorrect because it does not establish Tom's mood, instead making a general comment on the day appearing "bright" and "fresh." Choice (B) is incorrect because it simply explains that Tom appeared with a brush and a bucket of whitewash, which does not convey Tom's attitude toward painting the fence. Finally, while (D) does convey a slight sense of discouragement and weariness in Tom, the statement does not convey the depth of Tom's discouragement.

4) **➡ B**

Concept(s) Tested: Organization

Paragraph 2 starts out by discussing Tom's sorrow at having to paint the fence. Yet the paragraph transitions to a moment of "magnificent inspiration" that encourages Tom and brightens his mood. Thus, choice (B) is correct. (A) is incorrect because the paragraph does not mention Tom's generosity, only that he has a plan that cheers him up. (C) is incorrect because paragraph 2 does not discuss Tom's background or intelligence. (D) is incorrect because the paragraph describes Tom's feelings but does not justify them.

5) **➡ D**

Concept(s) Tested: Organization

The statement in lines 37 – 39 indicates that Tom is fascinated with his painting task. Yet the reader understands that Tom is pretending: the reader knows that Tom does not want to paint the fence and that he was suddenly struck by an idea. Thus (D) is correct. (A) and (B) are incorrect because one can infer that Tom's motivation is neither artistic expression nor making a good impression on one of his peers. (C) is incorrect because the reader knows that moments before, Tom was unenthusiastic about the task, and there is indication that he has changed his mind.

6) **⇒** C

Concept(s) Tested: Summary

Choice (C) is correct because Tom interests Ben by saying, "Does a boy get a **chance** to whitewash a fence every day?" (lines 61 – 62), **implying** that it is a rare opportunity. (A) is **incorrect** because Tom does not mention any other **activities**; rather, he pretends to focus all attention on whitewashing. (B) is incorrect because it is Ben who offers Tom an apple, not the other way around. (D) is incorrect because Tom does not mention **swimming**.

7) **⇒** C

Concept(s) Tested: Purpose

The correct choice is (C) because Tom speaks of Aunt Polly as an authority figure who is "awful particular," and that painting the fence "has got to be done very careful." He implies that Aunt Polly has privileged him by asking him to take on a task that only "one boy in a thousand, maybe two thousand," could do. (A) is incorrect because Tom does not blame Aunt Polly for depriving him of play time; he instead speaks of her with what appears to be reverence. (B) is incorrect because, while Tom pretends to be diligent for the sake of his ruse, he never suggests that Aunt Polly is lazy. (D) is incorrect because the opposite is true; Tom implies that Aunt Polly would not want Ben to help.

8) **⇒** A

Concept(s) Tested: Analogy

Tom's despondence changes when he has the idea to manipulate Ben into painting the fence for him. Thus, Tom is similar to a con man who wants to deceive Ben into thinking that whitewashing the fence is enjoyable and requires the talents of an expert, so (A) is correct. (B) is incorrect because a patron hires an artist to produce art, but in this case neither boy is paying the other to create anything for him; rather, Ben is "paying" Tom for the privilege of doing the work. (C) is incorrect because neither boy has authority over the other, and neither boy disapproves of the other. (D) is incorrect because Tom is not trying to find or catch Ben, and vice versa. Tom's principal aim is to get Ben to take over his chore.

9) **⇒** B

Concept(s) Tested: Words in Context

Lines 97 – 99 discuss "the late steamer" and "the retired artist." Ben was *recently* "**personating** (impersonating) a steamboat," and the reader can understand that Tom was **pretending to be** an artist, so (B) is correct. (A), (C), and (D) are **incorrect** because they do not make sense in the **context** of the story.

10) **⇒** B

Concept(s) Tested: Inference, Implication, and Suggestion

Choice (B) is correct because the passage indicates that Ben is being playful when impersonating a steamboat, revealing that "his heart was light" as he committed to his impersonation. On the other hand, Tom's impersonation of an artist is designed to interest Ben in painting the fence through manipulation. (A) is incorrect because there is little indication that Ben's impersonation of a steamboat evinces any skill while Tom's impersonation of an artist is apparently convincing. (C) is incorrect because, while Ben's impersonation of a steamboat may be harmless, saying that Tom is hurting Ben by impersonating an artist is not entirely true. (D) is incorrect because there is no indication in the passage that Ben's impersonation offends Tom, and Tom is not offering artificial compliments to Ben.

11) **⇒** C

Concept(s) Tested: Primary Purpose

Choice (C) is correct because, in both the first and the last paragraphs, the author makes the claim that "we should be doubling our efforts to make geothermal a viable power source," (lines 10 – 11). Choice (C) is also supported throughout the passage, as the author spends the majority of the passage espousing the benefits of geothermal energy and advocating for more geothermal-related research. Choice (A) is incorrect because there is no indication that geothermal energy production is "controversial." Choice (B) is incorrect; although the passage occasionally compares geothermal energy to other renewable energies, these comparisons primarily serve to support the passage's main argument. Choice (D) is incorrect because fossil fuels are not discussed in the passage.

12) **⇒** B

Concept(s) Tested: Summary

Choice (B) is correct because lines 19 – 24 reveal that underground water "is heated to the boiling point by hot rocks underground," so the heat sources for geothermal energy can be described as "subterranean (underground) rocks." Choices (A) and (D) are incorrect because they are unsupported by the passage, and choice (C) is incorrect because "underground water" is what is heated by the rocks, so the reservoirs are not the sources of heat, but rather the medium through which heat is converted into energy.

13) **⇒** D

Concept(s) Tested: Inference, Implication, and Suggestion

Choice (D) is correct because all forms of geothermal energy production described in the passage

(traditional and EGS) require large amounts of aboveground or belowground water for conversion into steam for energy. Therefore, it is reasonable to assume that geothermal energy production requires access to water reserves.

14) **⇒** A

Concept(s) Tested: Words in Context

Choice (A) is correct because, as used in the passage, "angle" is describing the point-of-view of U.S. "national security," and "perspective" is closest in meaning to point-of-view, making (A) the most appropriate choice. All other choices are incorrect because they do not fit the context of the sentence.

15) **⇒** B

Concept(s) Tested: Summary

Choice (B) is correct because paragraph 4 explains that the U.S. lacks hot shallow groundwater, and that the use of EGS can compensate for this because it allows one to drill into any hot rock and then connect the hot rock to a water source, thus supporting the claim in choice (B). Choice (A) is incorrect because the passage does not claim that EGS is more efficient than other forms of renewable energy. Choice (C) is disproven by the passage: lines 58 – 69 imply that EGS might require more drilling and maintenance than other renewable energy sources. Choice (D) is also disproven by the passage: lines 84 – 86 state that geothermal energy (including EGS) "should be used alongside... wind and solar" energies.

16) **⇒** D

Concept(s) Tested: Words in Context

Choice (D) is correct; in the final paragraph, the "silver bullet" is contrasted with "silver buckshot," which is defined as "a collection of solutions [that] add up to a big impact." Because the "silver bullet" is contrasted with "silver buckshot," we can infer that a "silver bullet" is the opposite of "a collection of solutions," which can be summarized as "an all-encompassing solution." All other choices are incorrect because they do not contrast with the definition of "silver buckshot," and therefore do not fit the context of the sentence.

17) **⇒** A

Concept(s) Tested: Purpose

Choice (A) is correct; throughout the passage, the author espouses the benefits of geothermal energy, one of which is its accessibility (see lines 34 – 37). The phrase "right under our feet" serves to emphasize, or "underscore," this accessibility by explaining the geothermal energy comes from a source that is easily accessible and close by. Choice (B) is incorrect because it is disproven

by lines 38 – 41, which reveal that the U.S. lacks accessible underground water. Choices (C) and (D) are incorrect because they do not fit the meaning of the phrase "right under our feet," which relates to geothermal energy's accessibility more than its production or uses.

18) **⇒** B

Concept(s) Tested: Attitude and Tone

Choice (B) is correct because both the first and last paragraphs advocate for widespread geothermal energy production, implying that the author is "hopeful" that geothermal energy will be more widely adopted in the future. Choice (A) and (D) are incorrect because the passage takes a positive view towards geothermal energy production, so the negative attitudes in (A) and (D) are unsupported. Choice (C) is incorrect because the author presents numerous statistics which demonstrate that he understands geothermal energy production, so he does not seem "surprised" in the passage.

19) **⇒** A

Concept(s) Tested: Citation

Choice (A) is correct because, in this excerpt, the author mentions "potential benefits" of geothermal energy production and advocates for making it "a viable power source for the U.S.," thus summarizing his hopeful and optimistic attitude toward U.S. geothermal energy production. All other choices are incorrect; although they provide information about geothermal energy production, they do not provide any information that would support the author's hopeful attitude.

20) **⇒** A

Concept(s) Tested: Graph and Text Synthesis

Choice (A) is correct because the graph illustrates that wind and solar energy production is much more variable than geothermal energy production is, which implies that environmental factors (such as total sunlight and wind) affect wind and solar energy production more than they do geothermal energy production. This choice is further supported by lines 28 – 32 of the passage.

21) **⇒** B

Concept(s) Tested: Graph and Text Synthesis

Choice (B) is correct; these lines explain that geothermal energy can be produced more consistently than wind or solar energies, and they are supported by the graph, which illustrates that geothermal produces energy at a rate that is closer to maximum capacity than wind or solar energies.

22) **⇒** D

Concept(s) Tested: Summary

Darwin states at the beginning of the paragraph

that he uses the term "struggle for existence" in a "large and metaphorical sense," then sets that against the example of the "two canine animals," such as wolves or dogs, fighting for food when there is a dearth (shortage) of it. His point is that the struggle for existence extends beyond the out-and-out fight to eat between two animals. Thus, the answer is (D). Choices (A), (B), and (C) are incorrect because they do not describe the author's basic contrast in the paragraph.

23) **⇒** C

Concept(s) Tested: Words in Context

The correct choice is (C) because in line 2, the author explains in what sense he is using a term—that is, what *meaning* he intends. Choices (A), (B), and (D) are incorrect because the author is not discussing the feeling, wisdom, or perception of what he intends, but rather, the meaning.

24) **⇒** A

Concept(s) Tested: Summary

Choice (A) is correct because Darwin is painting a new world-view for readers of his era in which nature is not gentle, and large-scale "destruction" is normal. (B) is incorrect because, although Darwin does make the claim that such understanding is ultimately impossible, it is not the passage's main focus. (C) is incorrect because, while Darwin does mention dependence among organisms, it is, again, not his main topic. (D) is incorrect because Darwin does not mention anything about human reproduction levels.

25) **⇒** C

Concept(s) Tested: Citation

Choice (C) is correct because lines 40–45 support the claim that all organisms struggle to survive because more are produced than can survive. (A) is incorrect because it is a specific example, not a statement that summarizes the main point of the passage. (B) is incorrect because, again, it is only one example of an organism's competitive challenge. (D) is incorrect because it refers to a theory that helps explain the point; it is not in and of itself a central claim.

26) **⇒** D

Concept(s) Tested: Citation, Graph and Text Synthesis

Choice (D) is correct because the graph depicts the "principle of geometric increase" in population that Darwin mentions in lines 37–38, as well as the way that a population inevitably exceeds its food supply such that "no country could support" it. Choices (A), (B), and (C) are incorrect because they describe aspects of the struggle for existence but only relate to the graph indirectly.

27) **⇒** B

Concept(s) Tested: Purpose

The correct choice is (B). In lines 45–49, after Darwin makes his main claim about the struggle for existence, he explains that he has been describing Malthus's population theory, but in relation to animals and plants. (A) is incorrect because Darwin is using, not rejecting, Malthus's theory. (C) is incorrect because Darwin does not provide evidence or reasoning to support Malthus; he assumes the reader already accepts Malthus's conclusions. (D) is incorrect because Darwin is not discussing artificial food production.

28) **⇒** B

Concept(s) Tested: Words in Context

Choice (B) is correct because in line 48, Darwin mentions that plants and animals must rely on a natural food supply, presumably as opposed to humans, who have an "artificial" food supply in the sense that we can grow crops and raise animals; in other words, we can *cultivate* food. (A) and (C) are incorrect because Darwin clearly is not referring to fake or imitation food, but simply to food that is not wild. (D) is incorrect because there is no indication that Darwin considers cultivating food to be dishonest.

29) **⇒** C

Concept(s) Tested: Attitude and Tone

The correct choice is (C). In paragraph 3, Darwin says that it is good to try to understand why some species or individuals have advantages, but to keep in mind that it will be impossible to completely succeed, because of limitations in our perceptions. He is most like a teacher encouraging his students to persist in a difficult task. (A) is incorrect because Darwin does not propose any policies in the passage. (B) is incorrect because Darwin is not simplifying concepts but commenting on them. (D) is incorrect because Darwin does not promote any action except research and study.

30) **⇒** A

Concept(s) Tested: Summary

Choice (A) is correct because Darwin points out that when we try to comprehend the vast number connections ("mutual relations") between an organism and its environment, we will inevitably fail, and that we should be aware of that, even though it is difficult to accept. (B) is incorrect because Darwin does not advocate respect or protection for organisms or habitats in the passage. (C) is incorrect because Darwin does not claim that humans are part of these relationships. Finally, (D) is incorrect because Darwin does not explicitly advocate more study.

31) **⇒** D**Concept(s) Tested: Organization**

In paragraph 1, Darwin defines several senses of the term "Struggle for Existence." In paragraph 2 he explains why this struggle takes place: the high reproduction rate of species. He sums up these ideas in the last paragraph and adds some commentary about how to approach the study of organisms. Thus, the passage as a whole has a Definition—Explanation—Commentary structure, and choice (D) is correct. (A) is incorrect because the author is not presenting a thesis in paragraph 1, but is instead defining and giving examples of a term. Likewise, paragraph 3 does not provide any consequences of the discussion in the previous two paragraphs. (B) is incorrect because none of the information in paragraph 1 is stated in the form of a question. Finally, (C) is incorrect because the second paragraph is not in the form of a counterargument—the author does not argue against anything he stated in the first paragraph.

32) **⇒** A**Concept(s) Tested: Inference, Implication, and Suggestion**

The correct choice is (A) because in line 4, Henry says that after so many failed attempts, it would be useless ("vain") to "indulge in fond hopes (wishful thinking) of peace and reconciliation." (B) is incorrect because Henry is not arguing for a standoff with the British, but for war. (C) is incorrect because Henry's point is not that the British may be ready to negotiate, but that the time for negotiating with the British has passed. (D) is incorrect because Henry is not speaking specifically about the state of Virginia, but about the colonies as a whole.

33) **⇒** B**Concept(s) Tested: Citation**

Choice (B) is correct because, in lines 5 – 7, Henry describes hopes for peace as being "in vain," or futile. (A) is incorrect because lines 4 – 5 merely provide the context for Henry's claim about wishful thinking. (C) and (D) are incorrect because they are both part of Henry's exhortations to the assembly to go to war, and they do not speak clearly and directly to the idea that peace is impossible under the present circumstances.

34) **⇒** C**Concept(s) Tested: Words in Context**

Henry uses the phrase "the glorious object of our contest" to refer to the objective, or *goal*, of American independence. Thus, choice (C) is correct. Choice (A) is incorrect because a recipient

is someone who receives something, and Henry is **not talking** about a "recipient" of the aim or goal of independence, but the goal itself. (B) is incorrect because an "item" is a thing, which does not make sense in the context of the sentence. (D) is also incorrect: although the colonies are protesting their treatment by the British, their protests are meant to achieve a specific *goal*—independence.

35) **⇒** D**Concept(s) Tested: Purpose**

The answer is (D). In line 26, Henry warns that if colonists do not fight, they will end up "in submission and slavery," and he adds the metaphor "our chains are forged!" to imply that the British have prepared oppressive laws and policies for the colonies, presumably to prevent further rebellion. (A) is incorrect because Henry is speaking metaphorically about political oppression, not about making weapons to fight the British. (B) is incorrect because Henry does not use the metaphor of the chains to imply that people are doomed; rather, he is using it to warn about what could happen if colonists try to avoid war. (C) is incorrect because the threat of the chains is not addressing actual slavery, but rather a metaphor for political oppression.

36) **⇒** B**Concept(s) Tested: Inference, Implication, and Suggestion**

In lines 42 – 50, Tecumseh warns that Native Americans must unite or they all will be "driven from" their native country, or *forcibly detached* and "blown away" like leaves blown from trees in autumn. Thus, (B) is correct. Since Tecumseh is only speaking metaphorically, and not literally, about autumn leaves being "blown by wind," (A) is incorrect. (C) is incorrect because it articulates a more general consideration than what Tecumseh is speaking about. Finally, (D) is incorrect because Tecumseh is not discussing self-restraint; he is instead trying to provoke action.

37) **⇒** D**Concept(s) Tested: Inference, Implication, and Suggestion**

Choice (D) is correct because Tecumseh speaks of the need for the different Native American tribes to unite and collectively face the danger that is upon them. (A) is incorrect because it encompasses part of Tecumseh's message, but not its overall focus on uniting forces. (B) is incorrect, because while Tecumseh does state that whites "kick and strike" them as they do African Americans (lines 79 – 80), Tecumseh does not imply that Native American tribes should unite with African Americans. Finally, (C) is incorrect because Tecumseh's focus

is on the tribes' need to unite and see themselves as one group; he is not discussing how to preserve unique tribal cultures.

38) **⇒** A

Concept(s) Tested: Citation

(A) is the correct choice because in lines 55 – 57, Tecumseh clearly states his fear that the very survival of native tribes is at stake, and that their only hope is to combine forces to fight. (B) is incorrect because it is more of a general warning to the audience than an articulation of his overall message. (C) is incorrect because it is one of the reasons to fight, not Tecumseh's overall call to arms. Choice (D) contains a rhetorical question that Tecumseh is using to motivate Native Americans to unite, so it is not a direct message.

39) **⇒** B

Concept(s) Tested: Words in Context

Usually "want" is used as a verb that is similar in meaning to "desire." The noun form of "want" refers to a lack of something, as in a "need." Tecumseh is saying here that the Native American tribes had neither riches nor wants—they were not rich but they did not lack anything that they needed. Only choice (B)—"privations"—means the same thing as "want" in this context. (A) is incorrect because having a "wish" is having a desire for something, while having a "want" is having an unmet need. (C) is incorrect because an "interest" is a desire to know something or learn something. This is conceptually different from a want. Finally, (D) is incorrect because an "objective" is an aim or goal, not quite the same as an unmet need.

40) **⇒** D

Concept(s) Tested: Multiple-Text Synthesis

The correct choice is (D). The two passages differ in that Henry warns about political oppression while Tecumseh warns of being evicted and scattered—a "complete loss of communities." (A) is incorrect: although Tecumseh accuses the Choctaws and Chickasaws of having "false security and delusive hopes" of peace, he does not explicitly describe peaceful yet ultimately ineffective protests. (B) is incorrect because neither writer predicts victory; only that war is inevitable. (C) is incorrect because both men, not just Tecumseh, state that war has begun or been ongoing.

41) **⇒** D

Concept(s) Tested: Multiple-Text Synthesis

Choice (D) is correct. In Passage 1, Henry speaks metaphorically of the colonists' chains being forged, but the colonists are not in danger of being literally enslaved. This fact distinguishes Henry's argument from Tecumseh's argument in Passage

2, because Tecumseh warns of literal slavery if the Native American tribes do not unite to face the whites. (A) is incorrect because neither Henry nor Tecumseh describe their own experiences in battle. (B) is incorrect because Tecumseh expresses his willingness to die for his cause, asking rhetorically whether tribes should wait for slavery, or die fighting against it. Similarly, (C) is incorrect because both men speak of the need for unity; Henry exhorts his audience to join others to the north by saying "Our brethren are already in the field!" while Tecumseh also calls for tribes to combine forces.

42) **⇒** B

Concept(s) Tested: Multiple-Text Synthesis

Choice (B) is the correct answer because both speakers ask questions that are intended to motivate their audiences to risk their lives in battle. Henry asks, "Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery?" Tecumseh warns of slavery and asks, "Shall we wait for that moment, or shall we die fighting before submitting to such ignominy?" (A) is incorrect because neither passage uses "facts and figures." (C) is incorrect because neither passage mentions heroes. Finally, (D) is incorrect because both passages speak of the plight that their audiences face, and not specifically about the suffering of any one individual.

43) **⇒** B

Concept(s) Tested: Organization

Paragraphs 1 and 2 discuss the roles of computational scientists and the role of Brookhaven in managing the vast quantities of data from the collision experiments that physics researchers around the world sort through. In paragraphs 10 and 12, the author discusses the task of analyzing the enormous amount of data generated by particle colliders. Thus, (B) is correct. (A) is incorrect because the author does not speak about benefits and costs of experimentation. (C) is incorrect because the author shifts throughout the article from discussing the work of teams in the United States to discussing the work of teams in Europe. There are no places in the article where the focus is exclusively on the United States, and then exclusively on Europe. Finally, (D) is incorrect because although the passage briefly mentions current ideas about the genesis of the universe, there is no mention of past theories.

44) **⇒** D

Concept(s) Tested: Words in Context

A "landmark" finding is one that is so significant that it marks a change or a turning point in thinking. Thus, (D) is the correct choice because only the term "seminal" conveys a similar significance; "seminal" refers to new, influential ideas. Choice (A), "geographic," is incorrect because "landmark"

is not being used in a literal sense to refer to a structure or natural feature. (B) is incorrect because "visible" does not make sense in the context. In addition, (C) is incorrect because it adds a subjective evaluation of the findings and therefore is not a precise substitute.

45) **⇒** A

Concept(s) Tested: Inference, Implication, and Suggestion

Choice (A) is correct because the author quotes Ernst as saying that all of the individuals involved were committed to solving problems with the work, regardless of the time of day or night. This suggests that workers felt both collaborative and pressed for time. (B) is incorrect because although the atmosphere may have been stressful, to say that it was "frantic" is too strong; there is also no indication that it was competitive. (C) is incorrect because there is no evidence that the scientists involved were frustrated. The fact that problems were tackled head-on whenever they arose speaks to their dedication, not to frustration or aggression. Finally, (D) is incorrect because the quotes refer to the professional working atmosphere at the facility, not to the emotional atmosphere.

46) **⇒** A

Concept(s) Tested: Purpose

The extraordinary factors described in the work indicate the magnitude of the experiments. Thus, (A) is correct. (B) is incorrect because it conflicts with the author's positive tone toward the experiments being conducted, and there is no evidence that the author thinks the experimental procedures are wasteful. Likewise, (C) is incorrect because the author does not use jargon or references to concepts that might undermine the reader's self-confidence, and instead takes a neutral, explanatory tone. Finally, (D) is incorrect because at no point in paragraph 4 or in the passage as a whole does the author encourage the reader to get involved in the experiments.

47) **⇒** C

Concept(s) Tested: Inference, Implication, and Suggestion

The author mentions that the RHIC allows collision experiments to free quarks from gluons, which last occurred 100 millionths of a second after the Big Bang—the explosion that created the universe. Taken in conjunction with the claim that both the RHIC and LHC are "time machines," this suggests that both of these experiments allow physicists to better understand the Big Bang. Thus, (C) is correct. (A) is incorrect because no mention is made in the passage about challenges

to traditional notions of time and space. (B) is incorrect because the passage does not anywhere mention science-fiction. (D) is incorrect because the passage explicitly states that colliders provide information about how the universe began, not about what might occur in the future.

48) **⇒** A

Concept(s) Tested: Citation

Choice (A) is correct because in lines 30 – 34, the author explicitly states that research from the colliders provides information about the Big Bang. (B) does not directly support the connection between the research and the Big Bang, but rather provides a brief description of an apparent discovery from the research. (C) and (D) both provide information about the research process, but do not support the concept that the colliders are "time machines" because they give us a glimpse of the Big Bang.

49) **⇒** A

Concept(s) Tested: Summary

Lines 27 – 28 mentions that the RHIC smashes gold ions at speeds close to the speed of light; line 43 mentions that the LHC smashes protons into each other. Thus, (A) is the correct answer. (B), (C), and (D) are incorrect because they are not mentioned as colliding particles.

50) **⇒** A

Concept(s) Tested: Purpose

The phrase "needle in a haystack" is meant to convey the difficulty of finding something that is hidden among countless similar things. Thus, (A) is correct. (B) is incorrect because the passage nowhere mentions the mathematical impossibility of finding what the experimenters are looking for. Similarly, (C) is incorrect because the author does not use the image of the needle in the haystack to convey an idea about collaboration, but rather about the task itself. (D) is incorrect because the passage never discusses the size of the Higgs boson relative to an atom or ion.

51) **⇒** D

Concept(s) Tested: Inference, Implication, and Suggestion

In lines 73 – 75, the author states that even if the colliders created a Higgs boson, it would "instantly" decay into particles that are "detectable." Similarly, lines 62 – 63 state that the search for "particles and states of matter that don't exist in today's world" is challenging. These statements strongly suggest that the Higgs boson can only be detected indirectly, so (D) is correct. (A) is incorrect because the passage nowhere states that the Higgs boson does not exist, or that

scientists suspect that it does not exist. Likewise, (B) is incorrect because there is no indication that the search for the Higgs has generated controversy. Finally, (C) is incorrect because the passage offers no claim or evidence that the existence of the Higgs boson has been suspected since ancient times.

52)  D

Concept(s) Tested: Citation

The correct choice is (D), because lines 61 – 65 point out that the Higgs boson is a particle that does not exist today, and that it must be made by the colliders. The implication is that the Higgs boson can only be detected through indirect evidence. (A) is incorrect because it describes the researchers' excitement, not the method for identifying the Higgs boson. (B) is incorrect because it focuses on the possible results of particle collision experiments, but does not specify whether the results would be obtained directly or indirectly. (C) does focus on the Higgs boson discovery, but it is incorrect because it describes the significance of finding the particle, not the method used to find it.