

Verbal

Question 1

In their seminal 1968 study, Bibb Latané and John Darley investigated the "bystander effect," wherein individuals are less likely to offer aid in an emergency when other people are present. They posited that this phenomenon stems from a *diffusion of responsibility*, where the perceived need for personal intervention is _____, as others are assumed to share the obligation to act. This dilution of individual accountability corresponds with a decreased likelihood of helping behavior.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A diminished
- ☐ B amplified
- ☐ C diversified
- ☐ D established

Question 2

Fungal endophytes, microorganisms that live within plants without causing disease, are known to benefit their hosts, particularly in temperate grasses. However, less is understood about endophytes in tropical grasses. A 2021 study by Teixeira *et al.* investigated fungal endophyte communities in *Brachiaria* grasses, a tropical genus important for forage. The researchers isolated fungal endophytes from nine *Brachiaria* species using morphological and molecular techniques, identifying a diverse collection of 177 fungal isolates. This yielded 38 distinct operational taxonomic units (OTUs), predicted to represent 38 potential species. The study concluded that *Brachiaria* grasses harbor a large and genetically diverse group of putative fungal endophytes.

Which choice best describes the overall structure of the text?

- A** It introduces a well-known biological phenomenon, describes a study that challenges previous assumptions about this phenomenon, and presents the unexpected results of that study.
- B** It introduces a group of organisms, discusses a research study about these organisms in a specific environment, and presents the findings of that study.
- C** It describes a scientific problem, explains a proposed solution to this problem, and provides evidence that supports the effectiveness of the proposed solution.
- D** It highlights the importance of certain organisms, presents a classification system for these organisms, and explains how different categories within the system are characterized.

Question 3

Rather than pushing for immediate agreement, effective leaders cultivate environments where team members feel comfortable expressing varied perspectives. This deliberate cultivation of diverse viewpoints helps to avoid the _____ of thought that can hinder creativity and problem-solving, as highlighted in a 2017 study by organizational psychologist Dr. Kristine N. Sherman and colleagues in *Administrative Science Quarterly*.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A disparity
- ☐ B divergence
- ☐ C uniformity
- ☐ D complexity

Question 4

The emergence of Realism in 19th-century French painting, spearheaded by figures such as Gustave Courbet, marked a significant shift from the prevailing Romantic and Neoclassical styles. Realism sought to depict contemporary life and ordinary subjects with an unvarnished truthfulness, often focusing on the working class and rural existence. This approach challenged the established artistic hierarchy, which favored historical, mythological, or allegorical themes presented with idealization and dramatic flair. While Realism grounded itself in observable reality, Impressionism, which followed and was influenced by Realism, shifted the focus to the subjective perception of light and color, capturing fleeting moments and the *impression* of a scene rather than its precise details.

Which choice best describes the overall structure of the text?

- A** It introduces a new artistic movement, provides examples of its key artists and themes, and then discusses how it was superseded by a later, entirely unrelated movement.
- B** It describes an artistic movement and its characteristics, explains its historical context and the styles it rejected, and then details its eventual decline and replacement by a completely different movement.
- C** It presents an artistic movement and its core principles, contrasts it with the artistic styles that came before it, and then explains how a subsequent movement built upon but also differed from it.
- D** It outlines the development of an artistic movement, examines the social and political reasons for its rise to prominence, and then analyzes its lasting impact on various subsequent art forms around the world.

Question 5

In their seminal 1974 paper, Daniel Kahneman and Amos Tversky explored cognitive biases, particularly the anchoring effect. This phenomenon describes how individuals tend to rely heavily on the initial piece of information they receive (the "anchor") when making subsequent judgments, even if that initial information is irrelevant. This reliance often leads to adjustments that are _____ toward the initial anchor, resulting in estimations that deviate from objective values.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A insufficient
- ☐ B conclusive
- ☐ C impartial
- ☐ D unpredictable

Question 6

The bacterium *Vibrio fischeri* utilizes a sophisticated cell-to-cell communication system known as quorum sensing to regulate gene expression in accordance with population density. This process relies on the synthesis and release of signaling molecules called autoinducers into the surrounding environment. As the bacterial population grows, the concentration of these autoinducers in the extracellular milieu increases. Once a threshold concentration is reached, the autoinducers bind to cognate receptors, triggering a cascade of events that leads to the coordinated activation of target genes, such as those responsible for bioluminescence. This allows the population to exhibit a _____ behavior, ensuring that processes like light production are only initiated when the cell density is sufficient.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A collective
- ☐ B autonomous
- ☐ C sporadic
- ☐ D fundamental

Question 7

W.E.B. Du Bois, a prominent figure in the Pan-Africanism movement, was a strong _____ of unity among people of African descent worldwide. His efforts included organizing several Pan-African Congresses, demonstrating his belief in the need for global Black solidarity and liberation. He consistently promoted the idea that people of African descent shared common interests and should work together.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A critic
- ☐ B opponent
- ☐ C observer
- ☐ D advocate

Question 8

When someone's nonverbal behavior violates our expectations, we may perceive it positively or negatively depending on the violator's reward valence. For instance, a touch _____ a disliked coworker could be seen as a threat, a concept detailed in Judee Burgoon's theory.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A from,
- B from
- C from:
- D from—

Question 9

Studies of *Tardigrada*, or water bears, reveal their remarkable capacity to survive desiccation and other extreme environmental stressors. When faced with such conditions, these micro-animals can enter a state known as cryptobiosis, significantly reducing metabolic activity and physiological functions. This process allows them to become _____, enduring conditions that would be lethal to most other organisms for years, sometimes even decades.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A vigorous
- ☐ B quiescent
- ☐ C adaptive
- ☐ D mobile

Question 10

By studying quantum field theory and applying its principles, Hendrik Casimir made a prediction, proposing a unique force that arises from quantum fluctuations of the vacuum. In 1948 Casimir first described this _____ in 1997 it was first precisely measured by researcher Steve K. Lamoreaux.

Which choice completes the text so that it conforms to the conventions of Standard English?

- ☐ A Casimir effect,
- ☐ B Casimir effect
- ☐ C Casimir effect and
- ☐ D Casimir effect, and

Question 11

In 2014, a team of botanists led by Dr. Roxana Yockteng discovered every known genetic marker for horizontal meristems from the last few centuries. With this unique plant sample, the team was able to conclude how tissue-driven growth differs across _____ and what effect it has on the development of roots and branches in the plant.

Which choice completes the text so that it conforms to the conventions of Standard English?

- ☐ A species,
- ☐ B species:
- ☐ C species;
- ☐ D species

Question 12

In their 1951 study, Solomon Asch and his colleagues conducted experiments demonstrating the powerful effects of group pressure on individual judgment. Participants were asked to match the length of lines, a seemingly simple visual task. However, when surrounded by confederates who unanimously provided an incorrect answer, a significant portion of participants yielded to the majority, even when the correct answer was perceptibly _____. This highlights how social context can override individual perception and lead to conformity.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A ambiguous
- ☐ B contentious
- ☐ C subjective
- ☐ D discernible

Question 13

Linguist Penelope Brown, _____ to understand how language is used to maintain social harmony, identified the use of "hedges"—words like "perhaps" or "sort of"—as a key politeness strategy in her work with Stephen C. Levinson.

Which choice completes the text so that it conforms to the conventions of Standard English?

- ☐ A seeks
- ☐ B sought
- ☐ C seeking
- ☐ D is seeking

Question 14

The *Mimosa pudica* plant, commonly known as the touch-me-not, exhibits rapid leaf folding when touched. This quick physiological movement, studied by researchers like Monica Gagliano (2014), is a protective strategy. By collapsing its foliage, the plant appears wilted and less appealing, a _____ response designed to deter potential herbivores.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A intrinsic
- ☐ B complex
- ☐ C aesthetic
- ☐ D deterrent

Question 15

In their influential 1990 book, *Gender Trouble*, philosopher Judith Butler challenged conventional understandings of gender and sexuality by proposing the concept of gender performativity. Butler posits that gender is not an inherent, stable identity but rather a social construct that is produced and reinforced through repeated, stylized bodily acts and gestures. These performances, often unconsciously enacted, create the illusion of an internal gendered essence. According to Butler, the regulatory norms of gender are not only expressed through these performances but also actively constitute the subject, meaning that the individual's sense of gendered self is an effect of these repeated acts, not their cause. This perspective critically examines the assumption that sex is a fixed biological given upon which gender is layered, arguing instead that even the perception of biological sex is shaped by cultural and linguistic frameworks.

Which choice best states the main idea of the text?

- A** Judith Butler's *Gender Trouble* argues that while biological sex is a natural and unchanging category, gender is a fluid social construct performed through stylized bodily acts.
- B** The primary contribution of Judith Butler's *Gender Trouble* is its exploration of how societal expectations about gender are expressed through conscious and deliberate performances by individuals.
- C** *Gender Trouble* by Judith Butler primarily focuses on how the individual's internal sense of self is the driving force behind their outward expressions of gendered behavior.
- D** In *Gender Trouble*, Judith Butler contends that gender is not a predetermined internal state but is instead actively constituted through recurring social performances, a process that even influences the understanding of biological sex.

Question 16

While researching a topic, a student has taken the following notes:

- Pufferfish employ a distinctive antipredator strategy, rapidly ingesting water or air to inflate their bodies, transforming into a globular form to deter potential threats.
- This remarkable physiological adaptation involves a highly elastic stomach, which significantly expands due to a pleated internal structure and modified collagen fibers.
- The inflation process requires powerful oral and pharyngeal musculature for swift water intake, with a specialized valve preventing its expulsion from the distended stomach.
- Absence of a rigid ribcage and a flexible spine, coupled with extensible skin containing elastic fibers, facilitates extreme volumetric increase without compromising structural integrity.
- Research by scientists like Elizabeth Brainerd (1994) and Timothy Clark and Georgia McGee (2014) highlights that this energetically taxing response surprisingly allows for continued gill-based oxygen uptake.
- The inflation, often combined with the erection of dermal spines and potent tetrodotoxin, creates a multi-layered, formidable defense against predation.

The student wants to explain the sophisticated anatomical and physiological mechanisms that enable pufferfish to inflate their bodies for defense. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- A** Pufferfish utilize inflation as a primary defense mechanism, rapidly increasing their size to deter predators through a combination of physical transformation and chemical toxicity.
- B** Influential research by Elizabeth Brainerd and the team of Timothy Clark and Georgia McGee has illuminated various aspects of the pufferfish's unique inflation, including its metabolic demands.

- C The pufferfish's defense mechanism hinges on a highly elastic, pleated stomach, powerful oral muscles for rapid water ingestion, and flexible skeletal and dermal structures, collectively achieving significant volumetric expansion.
- D While pufferfish inflation is an impressive antipredator strategy involving rapid water intake, it is an energetically costly process that surprisingly does not completely halt their respiratory functions.

Question 17

Virginia Woolf's narrative technique in *To the Lighthouse* (1927) is often analyzed for its departure from traditional storytelling. Rather than focusing on external events, Woolf delves into the inner lives of her characters. This approach, known as stream of consciousness, presents the unedited and often fragmented flow of thoughts, feelings, and memories, creating a highly _____ portrayal of subjective experience.

Which choice completes the text with the most logical and precise word or phrase?

- ☐ A internalized
- ☐ B objective
- ☐ C generalized
- ☐ D verifiable

Question 18

Bose-Einstein is a 1924 theory by the Indian physicist Satyendra Nath Bose. Like many of Bose's theories, Bose-Einstein, which describes a state of matter at near absolute zero, attempts to explain the entire quantum mechanical _____ using statistical methods, the then-unproven theory details a strange new form of matter.

Which choice completes the text so that it conforms to the conventions of Standard English?

- ☐ A phenomenon while
- ☐ B phenomenon:
- ☐ C phenomenon
- ☐ D phenomenon, while

Question 19

For billions of years, Earth has maintained liquid water (H₂O) on its surface despite the Sun's lower luminosity. When considering early Earth, this presents a paradox _____ the Sun was significantly dimmer then, providing too little energy to prevent the planet's oceans from freezing over.

Which choice completes the text so that it conforms to the conventions of Standard English?

- ☐ A investigated,
- ☐ B investigated:
- ☐ C investigated
- ☐ D investigated and

Question 20

The 2013 study “Acoustic levitation of a large solid sphere” describes one powerful acoustic levitation system in modern-day Switzerland. Researchers have noted the way lead _____ details the properties of standing (sound waves that remain in a constant position) and traveling (their conventionally mobile counterparts).

Which choice completes the text so that it conforms to the conventions of Standard English?

- ☐ A scientist Dimos Poulikakos
- ☐ B scientist, Dimos Poulikakos
- ☐ C scientist, Dimos Poulikakos,
- ☐ D scientist Dimos Poulikakos,

Answers

Question 1

Correct Answer: A

The passage explains that "diffusion of responsibility" means that when others are present, individuals feel less personal responsibility to help. This feeling of lessened or reduced responsibility leads to a decreased likelihood of helping behavior. Therefore, the perceived need for personal intervention is lessened or reduced. Looking at the answer choices, (A) "diminished" means lessened or reduced. (B) "amplified" means increased. (C) "diversified" means varied. (D) "established" means created or set up. The only word that matches the meaning of lessened or reduced is "diminished."

Question 2

Correct Answer: B

The passage begins by introducing fungal endophytes. Then, it discusses a study about these organisms in tropical grasses. Finally, it presents the findings of that study. This matches the structure described in (B). (A) is incorrect because the study doesn't necessarily challenge previous assumptions, but rather expands knowledge on a less-studied area. (C) is incorrect as the passage describes a study investigating organisms, not a problem and its solution. (D) is incorrect because while it mentions the importance of the organisms, it does not present a detailed classification system.

Question 3

Correct Answer: C

The passage states that effective leaders encourage "varied perspectives" and "diverse viewpoints" to "avoid" the blank. Therefore, the blank must mean the opposite of "varied" and "diverse"—it must mean "sameness" or "lack of variety." (C) uniformity means the state of being the same or consistent, which directly matches this meaning. (A) disparity means a great difference, which contradicts the intended meaning. (B) divergence means moving apart or becoming different, which also contradicts the intended meaning. (D) complexity means the state of being intricate or complicated, which is unrelated to the concept of varied or same viewpoints.

Question 4

Correct Answer: C

The passage starts by introducing Realism and its principles. It then contrasts Realism with the Romantic and Neoclassical styles that preceded it. Finally, it explains how Impressionism was influenced by Realism but had different characteristics. This matches the structure described in choice (C). Choice (A) is incorrect because it claims the later movement was entirely unrelated. Choice (B) is incorrect because it discusses the decline and replacement by a completely different movement, which isn't accurate; Impressionism built on Realism. Choice (D) is incorrect because the passage does not examine social and political reasons or analyze lasting impact on various art forms around the world.

Question 5

Correct Answer: A

The passage states that the reliance on the initial anchor leads to "adjustments that are _____ toward the initial anchor". This means the adjustments made after the initial anchor are not enough to move the final judgment significantly away from the anchor. Therefore, the adjustments are described as inadequate or not enough. Looking at the choices, (A) insufficient means not enough, which matches the context. (B) conclusive

means settling an issue, which doesn't fit. (C) impartial means unbiased, which is the opposite of being skewed toward the anchor. (D) unpredictable means not able to be predicted, which isn't supported by the description of the bias. Thus, insufficient is the most logical and precise word.

Question 6

Correct Answer: A

The passage describes how autoinducers coordinate gene expression across the entire bacterial population, leading to actions like bioluminescence that are only effective when undertaken by the group. This indicates that the behavior exhibited is one performed by the cells acting together. The word "coordinated" also supports this idea. Therefore, the blank should be filled with a word that means related to a group or acting together. Looking at the answer choices, (A) collective means relating to a group. (B) autonomous means acting independently, which is the opposite of what is described. (C) sporadic means happening irregularly, which is not supported by the text. (D) fundamental means forming a necessary base or core, which doesn't fit the context of a group behavior. Thus, collective is the most logical and precise word.

Question 7

Correct Answer: D

The passage states that W.E.B. Du Bois "was a strong _____ of unity among people of African descent worldwide" and that he "consistently promoted the idea that people of African descent shared common interests and should work together." This indicates that the blank should be filled with a word that means someone who supports or promotes an idea.

(A) critic means someone who expresses disapproval. This contradicts the passage.

(B) opponent means someone who is against something. This contradicts

the passage.

(C) observer means someone who watches something. While Du Bois observed the need for unity, the passage emphasizes his active promotion of it.

(D) advocate means someone who publicly supports or recommends a particular cause or policy. This matches the description of Du Bois promoting unity and organizing congresses to support this idea.

Question 8

Correct Answer: B

Look at the clauses on both sides of the blank:

- "For instance, a touch from a disliked coworker"
- "could be seen as a threat"

The first part is not a complete clause—it's just a noun phrase ("a touch from a disliked coworker") that serves as the subject. The second part contains the predicate "could be seen as a threat." Together, they form one complete sentence with the structure: **subject + predicate**.

In the SAT, when we have a simple subject connected to its predicate, we **do not use any punctuation** between them. The word "from" is a preposition that connects "touch" to "a disliked coworker," and prepositions should not be preceded or followed by punctuation marks.

Therefore, **(B) from** is the correct answer.

Remember: Never place punctuation between a subject and its verb, or immediately before or after prepositions.

Question 9

Correct Answer: B

The passage describes tardigrades entering a state during extreme conditions where they significantly reduce "metabolic activity and physiological functions." The context indicates they become inactive or dormant to survive. The blank needs a word that means inactive or dormant. Looking at the choices: (A) vigorous means energetic or active, which is the opposite of the description. (C) adaptive describes the ability to change to suit new conditions, but the blank describes the state they enter, not the general ability. (D) mobile means capable of movement, which is also the opposite of an inactive state. (B) quiescent means inactive or dormant, which perfectly matches the description of reduced metabolic activity and the ability to endure harsh conditions by shutting down physiological functions. Therefore, (B) quiescent is the most logical and precise word.

Question 10

Correct Answer: D

Look at the clauses on both sides of the blank:

- 'In 1948 Casimir first described this _____'
- 'in 1997 it was first precisely measured by researcher Steve K. Lamoreaux.'

Both clauses are **independent clauses** because they each contain a subject and a verb and can stand alone as complete sentences.

In the SAT, to separate two independent clauses, we have to use either a **semicolon**, a **period**, or a **comma + FANBOYS** (For, And, Nor, But, Or, Yet, So). Looking at the answer choices, we see that option (D) provides "comma + and," which follows this rule since "and" is one of the FANBOYS coordinating conjunctions.

Therefore, **(D)** is the correct answer.

Note: Option (A) creates a comma splice error by using only a comma to separate two independent clauses. Option (C) uses "and" without a comma, which is incorrect when connecting two independent clauses.

Question 11

Correct Answer: D

Look at the clauses on both sides of the blank:

- "With this unique plant sample, the team was able to conclude how tissue-driven growth differs across species"
- "and what effect it has on the development of roots and branches in the plant"

The second clause begins with "and," which connects it to the first clause as part of a compound structure. Specifically, "how tissue-driven growth differs across species" and "what effect it has on the development of roots and branches" are both objects of the verb "conclude."

In the SAT, when two items are connected by "and" to form a compound structure, **no punctuation should separate them**. The word "and" itself provides the necessary connection between the two parallel elements.

Therefore, **(D) species** is the correct answer because no punctuation is needed before "and" when it connects compound elements within the same sentence structure.

Question 12

Correct Answer: D

The passage describes a situation where participants knew the correct answer but were swayed by group pressure to give an incorrect one. This happened even when the correct answer was easy to see. Therefore, the blank needs a word that means easy to see or perceive.

Let's look at the answer choices.

(A) ambiguous means unclear or open to interpretation. This contradicts the idea that the correct answer was easy to see.

(B) contentious means likely to cause argument. This doesn't fit the context of a simple visual task.

(C) subjective means based on personal feelings or opinions. The line length task has an objectively correct answer, not one based on opinion.

(D) discernible means able to be perceived or recognized. This accurately describes a correct answer that is easy to see, which aligns with the passage's description of the task and the surprising finding that people conformed despite this clarity.

Question 13

Correct Answer: C

This question tests **verb forms**, specifically the use of participles as modifiers.

The phrase between the commas describes linguist Penelope Brown and modifies the subject. When a descriptive phrase modifies a noun in this way, we need a **participle** (a verb form ending in -ing or -ed that functions as an adjective), not a conjugated verb.

The present participle "**seeking**" correctly creates a modifying phrase that describes Brown's intention or purpose. This construction is parallel to saying "Penelope Brown, who was seeking to understand..." but in a more concise form.

(C) seeking is the correct answer.

Note: Be careful not to confuse this with subject-verb agreement. Although we have a singular subject (Penelope Brown), this question is not testing whether we need a singular or plural verb. The structure requires a participle to create a modifying phrase, not a conjugated verb form.

Question 14

Correct Answer: D

The passage describes the plant's leaf folding as a "protective strategy" that makes the plant "appear wilted and less appealing" and is "designed to deter potential herbivores." The blank needs a word that means "serving to deter or discourage."

(A) "Intrinsic" means belonging naturally or essential, but the context emphasizes the *purpose* of the response (to deter), not just its inherent nature.

(B) "Complex" means having many parts or difficult to understand. While the plant's mechanism might be complex, the passage focuses on its *function* or *effect*, not its intricacy.

(C) "Aesthetic" means concerned with beauty or the appreciation of beauty. This contradicts the passage, as the response makes the plant "less appealing" to deter herbivores, not more beautiful.

(D) "Deterrent" means serving to deter or discourage. This perfectly matches the description that the response is "designed to deter potential herbivores."

Question 15

Correct Answer: D

The passage explains Judith Butler's idea from *Gender Trouble*. It says gender is not something you are born with but is made by repeating actions and gestures. These actions make it seem like gender is something inside a person. The passage also says that even what we think of as male or female bodies is shaped by culture and language.

Choice (D) matches this idea the best. It says gender isn't set from the start but is made by social actions, and this even affects how we see biological sex.

Choice (A) is wrong because the passage says that Butler argues that even biological sex is shaped by culture, not that it is natural and unchanging.

Choice (B) is wrong because the passage mentions that the performances are "often unconsciously enacted," not primarily conscious and deliberate.

Choice (C) is wrong because the passage states that the sense of gendered self is an "effect" of the repeated acts, not the driving force behind them.

Question 16

Correct Answer: C

For Students' Notes questions, you should as always start by reading the question. Here, the student wants to explain the sophisticated anatomical and physiological mechanisms that enable pufferfish to inflate their bodies for defense.

Looking at the answers:

- (A) provides a general overview of the pufferfish's defense mechanism, mentioning both inflation and toxicity, but doesn't detail the mechanisms behind the inflation.
- (B) focuses on the researchers who have studied the pufferfish's inflation process rather than the mechanisms themselves.
- (C) directly addresses the student's goal by detailing the specific anatomical and physiological features mentioned in the notes: the elastic stomach, powerful muscles, and flexible skeletal and dermal structures.
- (D) discusses the energetic cost and respiratory function during inflation, which are consequences of the mechanism, not the mechanism itself.

Hence, (C) is the correct answer.

Question 17

Correct Answer: A

The passage describes Virginia Woolf's narrative technique as focusing on the "inner lives of her characters" and presenting the "flow of thoughts, feelings, and memories." This technique, stream of consciousness, creates a "subjective experience." The blank modifies "portrayal of subjective experience," suggesting a word that aligns with the idea of inner thoughts and personal feelings.

Let's look at the choices. (A) "internalized" means relating to inner thoughts and feelings, which fits the description. (B) "objective" means based on facts and not influenced by personal feelings, which is the opposite of subjective experience. (C) "generalized" means made into a general statement, which doesn't fit the context of individual thoughts. (D) "verifiable" means able to be proven true, which is not relevant to the subjective nature of stream of consciousness.

Therefore, the most logical and precise word to complete the text is "internalized."

Question 18

Correct Answer: B

Look at the clauses on both sides of the blank:

- "Bose-Einstein, which describes a state of matter at near absolute zero, attempts to explain the entire quantum mechanical phenomenon"
- "the then-unproven theory details a strange new form of matter"

The first clause is an independent clause (it has a subject "Bose-Einstein" and a complete predicate "attempts to explain"). The second clause is also an independent clause (it has a subject "the then-unproven theory" and a complete predicate "details a strange new form of matter").

In the SAT, to separate two independent clauses, we can use a semicolon, a period, or a colon. Looking at the answer choices, only the colon appears as an option.

The colon is particularly appropriate here because the second clause provides a specific explanation of what the theory does—it introduces details about the "strange new form of matter" that the theory describes.

Therefore, **(B) phenomenon:** is the correct answer.

Question 19

Correct Answer: B

Look at the clauses on both sides of the blank:

- "When considering early Earth, this presents a paradox investigated"
- "the Sun was significantly dimmer then, providing too little energy to prevent the planet's oceans from freezing over"

The first clause is an independent clause with the subject "this" and the predicate "presents a paradox investigated." The second clause is also an independent clause with the subject "the Sun" and the predicate "was significantly dimmer then."

In the SAT, to separate two independent clauses where the second clause explains or elaborates on the first, we can use a **colon** or a **dash**. In this case, the second clause explains what the paradox is—specifically, that the Sun was dimmer but Earth still had liquid water.

A colon is appropriate here because the first clause is a complete sentence that introduces what follows: the explanation of the paradox.

Therefore, **(B) investigated:** is the correct answer.

Question 20

Correct Answer: A

This question tests the punctuation rule for names and titles.

The relevant rule is: when a title (like "scientist") comes before a name, we need to determine if the information is essential or non-essential. If the name is essential (meaning we need it to identify which specific person we're talking about), we use no commas. If the name is non-essential (meaning the title alone is sufficient), we use two commas to set it off.

To test this, we can try removing the name "Dimos Poulikakos" from the sentence. If we read "Researchers have noted the way lead scientist details the properties...", the sentence becomes unclear—we don't know *which* lead scientist is being discussed. This tells us the name is essential information that identifies the specific scientist, so no commas should be used.

Therefore, **(A)** is the correct answer because it treats the name as essential information and correctly uses no punctuation between "scientist" and "Dimos Poulikakos."