

Text Structure and Purpose

Question 1

Iron is a vital micronutrient for phytoplankton growth, playing a crucial role in metabolic processes like photosynthesis. However, the bioavailability of iron in marine environments is often limited. Phytoplankton have evolved various mechanisms to acquire iron under scarce conditions, including diverse uptake strategies and the ability to modulate their iron requirements under stress. Studies on nutrient uptake kinetics, which examine the rate at which phytoplankton absorb ions, utilize mathematical models, often based on Michaelis-Menten kinetics, to understand this process. This modeling helps describe the dependence of the uptake rate on environmental conditions and the concentration of the nutrient. Phytoplankton can adjust their uptake machinery in response to nutrient availability, a form of acclimation.

Which choice best states the main purpose of the text?

- A** To compare and contrast different mathematical models used to study nutrient uptake kinetics in phytoplankton.
- B** To provide an overview of how phytoplankton acquire and utilize iron in iron-limited marine environments.
- C** To argue that Michaelis-Menten kinetics is the most effective model for understanding phytoplankton iron uptake.
- D** To describe the evolutionary history of iron acquisition mechanisms in various phytoplankton species.

Question 2

The work of anthropologist Zora Neale Hurston, particularly her 1935 book *Mules and Men*, offers a fascinating look into African American folklore in the early 20th century. Hurston, herself a trained anthropologist, collected and documented a wealth of stories, songs, and cultural practices from communities in Florida and Louisiana. While some contemporary critics viewed her approach as overly subjective or even exploitative, Hurston's work is now largely celebrated for its authentic portrayal of these traditions and its significant contribution to the fields of anthropology and African American studies. Her methodology, which involved deep immersion in the communities she studied, allowed her to capture the nuances and vitality of the folklore in a way that more detached observational methods might have missed.

Which choice best states the main purpose of the text?

- A** To criticize the methodologies used by Zora Neale Hurston in her anthropological research.
- B** To discuss the significance of Zora Neale Hurston's *Mules and Men* within the context of anthropology and African American studies.
- C** To compare Zora Neale Hurston's approach to folklore collection with more traditional anthropological methods.
- D** To provide a historical overview of African American folklore as documented in *Mules and Men*.

Question 3

Magnetostratigraphy is a chronostratigraphic dating technique used by geologists and paleomagnetists to date sedimentary and volcanic sequences. It relies on the fact that Earth's magnetic field has reversed its polarity at irregular intervals throughout geologic time. These reversals are recorded by magnetic minerals within rocks as they form. By analyzing the pattern of these magnetic reversals in a rock sequence and comparing it to the known global magnetic polarity time scale, scientists can determine the age of the rock layers. This technique is particularly useful in dating rocks that lack fossils or suitable materials for radiometric dating, extending our ability to date and correlate geologic events further back in time. Magnetostratigraphy, in conjunction with other dating methods like biostratigraphy and radiometric dating, provides a more complete understanding of Earth's history.

Which choice best describes the function of the underlined sentence in the text as a whole?

- A** It clarifies the process by which magnetic reversals are recorded in rocks.
- B** It provides examples of the types of magnetic minerals analyzed in magnetostratigraphy.
- C** It explains the significance and utility of magnetostratigraphy in geological dating.
- D** It introduces a limitation of magnetostratigraphy compared to other dating techniques.

Question 4

Fungal infections, or mycosis, are diseases caused by a fungus (yeast or mold). They usually affect your skin, hair, nails or mucous membranes but they can also infect your lungs or other parts of your body. Systemic fungal infections are more serious and include cryptococcosis, histoplasmosis, pneumocystis pneumonia, aspergillosis and mucormycosis. Although the limited number of targets and the emergence of resistance have posed challenges to antifungal treatment, new drugs such as ibrexafungerp, rezafungin, fosmanogepix, or olorofim have shown promising clinical efficacy. These drugs not only provide alternative options for invasive fungal infections but also alleviate treatment in outpatient settings. Researchers have also discovered a method to combat fungal infections by targeting their fatty acid production, offering hope against drug-resistant fungi.

Which choice best states the main purpose of the text?

- A** To discuss recent developments and promising approaches in the treatment of fungal infections.
- B** To explain the different types of fungal infections and their prevalence in the population.
- C** To highlight the challenges associated with developing effective treatments for fungal diseases.
- D** To argue for increased funding for research into novel antifungal therapies.

Question 5

Spider silk has garnered considerable scientific interest due to its remarkable mechanical properties, including high tensile strength and elasticity, often exceeding that of steel and Kevlar on a weight-for-weight basis. Researchers are investigating the complex protein structure of spider silk, which consists primarily of spidroins, and the process by which spiders spin these proteins into fibers. The unique composition and hierarchical structure at the molecular level contribute to silk's extraordinary toughness and extensibility. Understanding these biological mechanisms could pave the way for synthesizing artificial silk with similar properties for various applications, such as biomaterials, textiles, and engineering.

Which choice best states the main purpose of the text?

- A** To explain the scientific reasons behind spider silk's exceptional properties and its potential for technological applications.
- B** To compare the tensile strength of spider silk to that of steel and Kevlar.
- C** To describe the process by which spiders produce silk fibers from spidroin proteins.
- D** To advocate for increased research into the use of spider silk as a biodegradable material.

Question 6

The Roman road network was a monumental achievement of ancient engineering, spanning over 400,000 kilometers at its zenith. These roads were not merely pathways but meticulously constructed arteries vital to the functioning of the Roman state. Primarily built by legionaries, often with the assistance of slaves, the roads followed remarkably straight courses, frequently disregarding challenging topography to minimize travel time for troops. While initially conceived for military logistics, enabling swift movement of legions and supplies, the network profoundly impacted economic and social spheres. These durable constructions, utilizing materials like volcanic ash concrete (*pozzolana*), facilitated trade, communication, and cultural diffusion across the vast empire. Their strategic placement and robust construction contributed significantly to Roman expansion and long-term stability, leaving a lasting legacy on European infrastructure.

Which choice best states the main purpose of the text?

- ☐ A To describe the construction and significance of the Roman road network.
- ☐ B To argue that Roman roads were the most important factor in the success of the Roman Empire.
- ☐ C To compare Roman road-building techniques to modern road construction methods.
- ☐ D To detail the military campaigns that were made possible by the Roman road network.

Question 7

Enzymes are biological catalysts that accelerate chemical reactions. They achieve this by lowering the activation energy required for a reaction to proceed. Enzymes are highly specific, typically catalyzing only one or a limited number of related reactions. Their activity is influenced by various factors, including temperature, pH, and the concentration of substrates and products. The study of enzyme kinetics, which involves measuring reaction rates under different conditions, provides valuable insights into the mechanisms of enzyme action and regulation. This field utilizes models such as the Michaelis-Menten equation to describe the relationship between substrate concentration and reaction velocity, helping to understand how enzymes function within complex biological systems.

Which choice best states the main purpose of the text?

- ☐ A To explain the fundamental nature and study of enzymes.
- ☐ B To argue for the importance of enzyme kinetics in biological research.
- ☐ C To describe the specific mechanism by which enzymes lower activation energy.
- ☐ D To compare and contrast different types of enzymes found in biological systems.

Question 8

Exposure to ultraviolet-B (UV-B) radiation, a component of sunlight, can be detrimental to plant life, causing DNA damage, protein denaturation, and impaired photosynthesis. However, plants have evolved sophisticated mechanisms to mitigate these harmful effects. One crucial adaptation involves the synthesis and accumulation of specific phenolic compounds, such as flavonoids, which act as potent UV-B absorbents. These compounds are often deposited in the epidermal layers of leaves, forming a protective screen that filters out damaging radiation before it reaches sensitive internal tissues. Additionally, plants can activate DNA repair pathways to fix UV-B-induced lesions and produce antioxidants to neutralize reactive oxygen species generated by radiation stress.

Which choice best states the main purpose of the text?

- A** To discuss the evolutionary history of plant adaptations to various environmental stresses, including UV-B radiation.
- B** To analyze the specific chemical structures of flavonoids and other phenolic compounds that protect plants from UV-B damage.
- C** To describe the mechanisms plants employ to protect themselves from the harmful effects of UV-B radiation.
- D** To argue that UV-B radiation is the most significant threat to plant survival compared to other forms of radiation.

Question 9

A research study sought to investigate the effects of mindfulness meditation on stress levels in university students. The study recruited 100 undergraduate students and randomly assigned them to either a mindfulness meditation group or a control group. The meditation group participated in an 8-week mindfulness program, while the control group received no intervention. Stress levels were measured using the Perceived Stress Scale (PSS) before and after the intervention period. The results indicated a statistically significant reduction in PSS scores in the mindfulness meditation group compared to the control group. This suggests that mindfulness meditation can be an effective intervention for reducing stress in university students, with implications for student well-being initiatives.

Which choice best describes the overall structure of the text?

- A** It presents a problem, describes a potential solution, and then discusses the historical context of the problem.
- B** It outlines a research study's methodology, presents the findings, and then explains the theoretical basis for the results.
- C** It introduces a phenomenon, provides anecdotal evidence, and then offers a personal reflection on the topic.
- D** It describes a research study's design and execution, reports the outcome, and then suggests the implications of the findings.

Question 10

Volcanic outgassing is a significant source of atmospheric gases and can influence climate. Scientists analyze the composition of volcanic plumes and fumarole emissions to understand the processes occurring within the volcano and predict potential eruptions. Various techniques are employed, including direct sampling using specialized flasks or bottles and remote sensing methods like using spectrometers on the ground, in the air, or on satellites. These analyses measure the concentrations and emission rates of gases such as sulfur dioxide (SO₂), carbon dioxide (CO₂), and hydrogen sulfide (H₂S). Interpreting changes in gas ratios and fluxes provides valuable insights into magma ascent, degassing, and hydrothermal interactions.

Which choice best states the main purpose of the text?

- A** To argue for the importance of monitoring volcanic gases to predict climate change.
- B** To compare the effectiveness of different methods for sampling volcanic emissions.
- C** To describe how analyzing volcanic gases helps scientists understand volcanic activity.
- D** To explain the chemical reactions that occur in volcanic plumes after they are emitted.

Question 11

In his 1891 work *The History of Human Marriage*, Finnish philosopher and sociologist Edvard Westermarck proposed the *Westermarck effect*, a hypothesis suggesting that individuals who live in close domestic proximity during their early developmental years develop a sexual aversion to one another. This phenomenon, also known as reverse sexual imprinting, is considered an innate mechanism that contributes to the avoidance of inbreeding. Westermarck posited that this desensitization to sexual attraction among those raised together, regardless of biological relation, serves as a crucial, biologically driven foundation for the incest taboo observed across human cultures. Studies on individuals raised in Israeli kibbutzim and the outcomes of Chinese *Shim-pua* marriages have provided empirical support for this hypothesis, illustrating the effect's influence on marital patterns and sexual attraction.

Which choice best states the main purpose of the text?

- ☐ A To explain a hypothesis about the origins of incest avoidance and provide evidence supporting it.
- ☐ B To compare and contrast the *Westermarck effect* with other theories of sexual attraction and mate selection.
- ☐ C To argue that the *Westermarck effect* is the sole biological explanation for the incest taboo in humans.
- ☐ D To summarize Edvard Westermarck's entire body of work on marriage and human social structures.

Question 12

In her 2017 book, *Replenish: The Virtuous Cycle of Water and Prosperity*, water expert Sandra Postel examines the intricate relationship between human societies and freshwater ecosystems. Postel argues that centuries of attempting to control the water cycle through massive engineering projects like dams and diversions have led to significant financial and environmental costs. Instead of fighting against nature's rhythms, she proposes that the solution lies in repairing and replenishing freshwater resources. She highlights various global examples of successful water projects that collaborate with nature, such as forest restoration for safeguarding drinking water and "sponge cities" that capture rainwater. These initiatives, Postel suggests, are crucial for adapting to climate change and ensuring future water security.

Which choice best states the main purpose of the text?

- ☐ A To advocate for specific water engineering projects mentioned in Sandra Postel's book *Replenish*.
- ☐ B To criticize historical approaches to water management and their negative consequences.
- ☐ C To summarize Sandra Postel's background as a water expert and her previous publications.
- ☐ D To present Sandra Postel's argument for a new approach to water management and its supporting evidence.

Question 13

In their 2022 study, environmental sociologists Taryn McDougall and Debra Davidson investigated the concept of "climate gentrification," a phenomenon where areas less exposed to climate risks become more desirable, leading to increased property values and displacement of vulnerable populations. Focusing on coastal cities, they found that neighborhoods with higher elevations and better flood protection infrastructure experienced significant increases in housing costs and an influx of wealthier residents compared to lower-lying areas with less infrastructure. The study highlights how environmental factors can exacerbate existing social inequalities, transforming urban landscapes and displacing long-term residents.

Which choice best states the main purpose of the text?

- A** To present research findings on how climate risks contribute to social and economic displacement in urban areas.
- B** To argue that coastal cities should invest more in flood protection infrastructure to prevent displacement.
- C** To critique the methodology used in a specific study on the effects of climate change on housing markets.
- D** To advocate for policies aimed at mitigating the effects of climate change on vulnerable populations in urban settings.

Question 14

Geothermal energy, derived from Earth's internal heat, represents a significant renewable resource. There are several methods to harness this energy, primarily categorized based on the subsurface fluid conditions. Dry steam power plants directly utilize steam from underground reservoirs. Flash steam plants convert high-pressure hot water into steam by reducing pressure. Binary cycle plants transfer heat from geothermal fluid to a secondary fluid with a lower boiling point, which then drives a turbine. Geothermal heat pumps, another application, use the Earth's stable temperature for heating and cooling buildings. While initial drilling costs can be high, geothermal systems offer long-term cost savings, reliability, and a lower environmental impact compared to fossil fuels.

Which choice best states the main purpose of the text?

- ☐ A To argue for the widespread adoption of geothermal energy technology.
- ☐ B To compare the efficiency of different geothermal energy systems.
- ☐ C To detail the historical development of geothermal energy extraction methods.
- ☐ D To provide an overview of geothermal energy and its applications.

Question 15

Hibernation is a state of minimal activity and metabolic depression adopted by some animals to survive adverse environmental conditions, such as cold and lack of food, during winter. During hibernation, an animal's body temperature drops, heart rate and breathing slow significantly, and metabolism decreases drastically. They rely on stored body fat for energy. Climate change, with its milder winters and earlier springs, is increasingly disrupting this cycle. Hibernating animals, influenced by warmer temperatures and changing environmental cues, are sometimes emerging from torpor prematurely. This early arousal can be detrimental, as food sources may not yet be available, and late cold snaps can be lethal for animals with depleted energy reserves.

Which choice best states the main purpose of the text?

- ☐ A To explain how climate change is negatively impacting hibernating animals.
- ☐ B To describe the physiological changes animals undergo during hibernation.
- ☐ C To argue for the importance of hibernation for animal survival.
- ☐ D To discuss the different types of animals that hibernate.

Question 16

Glucagon-like peptide-1 (GLP-1) and glucagon-like peptide-2 (GLP-2) are peptides derived from the differential processing of the proglucagon gene. Both are secreted by L-cells in the intestine in response to nutrient intake. Despite being co-secreted, they exhibit contrasting effects on intestinal lipid handling. GLP-1 has been shown to reduce postprandial lipemia by decreasing lipid absorption and chylomicron production. In contrast, GLP-2 enhances lipid absorption and increases postprandial chylomicronemia. Studies, including those in Syrian golden hamsters, a model with similar lipoprotein metabolism to humans, have demonstrated these opposing roles. While acute co-infusion shows the predominant effect of GLP-2, sustained GLP-1 activity can lead to a decrease in postprandial lipemia.

Which choice best describes the overall structure of the text?

- A** It introduces two related substances, explains their shared origin and differing effects, and mentions research illustrating these effects.
- B** It defines a key biological process, discusses two peptides involved in that process, and then proposes a new hypothesis about their interaction.
- C** It presents a scientific problem, describes two potential solutions to the problem, and evaluates the effectiveness of each solution.
- D** It outlines the history of research into a specific gene, details the peptides produced by that gene, and explains their therapeutic applications.

Question 17

Eutrophication, the excessive enrichment of water bodies with nutrients, primarily nitrogen and phosphorus, is a significant environmental issue. This process leads to algal blooms, which are rapid increases in the population of algae. These blooms can be visually unappealing, producing a green blanket on the water surface with a foul smell. More importantly, they have detrimental effects on aquatic ecosystems. The dense algal growth blocks sunlight, preventing it from reaching other aquatic plants, such as seagrasses, which require light for photosynthesis. As these extensive algal blooms and other aquatic plants die, their decomposition by bacteria consumes large amounts of dissolved oxygen in the water. This depletion of dissolved oxygen can lead to hypoxic or anoxic conditions, creating "dead zones" where most aquatic organisms cannot survive, impacting fish and shellfish populations.

Which choice best describes the function of the underlined sentence in the text as a whole?

- ☐ A It introduces the primary causes of eutrophication in aquatic environments.
- ☐ B It presents a contrasting perspective on the effects of algal blooms.
- ☐ C It explains a critical step in the process by which algal blooms negatively impact aquatic life.
- ☐ D It argues for the implementation of policies to prevent nutrient enrichment in water bodies.

Question 18

In the mid-19th century, Realism emerged as a significant art movement in France, rejecting the prevailing Romanticism and academic art. Realist painters sought to depict everyday life and ordinary people with accuracy and truthfulness, often focusing on unidealized subjects and social issues. Gustave Courbet, a leading figure of Realism, challenged academic conventions by portraying scenes from daily life on a large scale, traditionally reserved for historical or religious subjects. His works like *A Burial at Ornans* (1849–50) and *The Stone Breakers* (1849) depicted ordinary people and rural life, which some critics found controversial due to their unvarnished portrayal and monumental scale. Courbet's approach, emphasizing direct observation and the realities of the modern world, significantly influenced subsequent art movements.

Which choice best describes the overall structure of the text?

- A** It introduces an art movement, describes its key characteristics, and discusses the work of a prominent artist within that movement.
- B** It presents a historical overview of an art movement and then analyzes its eventual decline.
- C** It defines a cultural phenomenon, explains its origins, and explores its impact on various disciplines.
- D** It discusses a specific artistic technique, provides examples of its use, and evaluates its effectiveness.

Question 19

Mycorrhizal fungi form symbiotic relationships with plants, extending their hyphae into the soil to enhance nutrient and water uptake for the host plant in exchange for carbohydrates produced during photosynthesis. These fungal networks can connect multiple plants, facilitating the transfer of resources and signaling molecules between them, sometimes referred to as the "wood wide web." This complex rhizosphere microbiome, the community of microorganisms in the soil directly influenced by plant roots, plays a crucial role in plant health and ecosystem functioning. Research into the diversity and interactions within this fungal network reveals intricate relationships that impact plant growth, nutrient cycling, and defense against pathogens.

Which choice best states the main purpose of the text?

- A** To describe the mutually beneficial relationship between mycorrhizal fungi and plants and its broader ecological significance.
- B** To argue that the term "wood wide web" accurately reflects the complexity of underground fungal networks.
- C** To highlight the challenges researchers face in studying the intricate interactions within the rhizosphere microbiome.
- D** To advocate for the conservation of fungal biodiversity due to its importance in nutrient cycling and plant defense.

Question 20

Extremophiles are organisms that thrive in environments previously thought to be incompatible with life, such as hydrothermal vents, highly saline lakes, or areas with extreme pH levels. These organisms have evolved unique physiological and molecular adaptations to survive and grow under these harsh conditions. Studying extremophiles offers profound insights into the potential for life beyond Earth, particularly on planets or moons with seemingly inhospitable environments. Furthermore, the unique enzymes and biochemical pathways discovered in extremophiles, known as extremozymes, have significant biotechnological applications, ranging from industrial processes to pharmaceuticals.

Which choice best states the main purpose of the text?

- A** To argue that the discovery of extremophiles has fundamentally changed our understanding of the definition of life.
- B** To compare and contrast the different types of extremophiles and their respective extreme habitats.
- C** To highlight the significance of extremophiles for scientific research and practical applications.
- D** To provide a detailed overview of the physiological and molecular adaptations that allow extremophiles to survive in harsh environments.

Answers

Question 1

Correct Answer: B

The passage explains how phytoplankton get and use iron in the ocean where iron is hard to find. It talks about why iron is important, how phytoplankton get it, and how they adapt. This matches choice (B). Choice (A) is too narrow; the passage only mentions Michaelis-Menten kinetics briefly. Choice (C) is an argument not made in the passage. Choice (D) discusses evolutionary history, which is not covered in the passage.

Question 2

Correct Answer: B

The passage talks about Zora Neale Hurston's book *Mules and Men* and how it is important in anthropology and African American studies. This matches choice (B). Choice (A) is wrong because the passage celebrates Hurston's work, it doesn't criticize it. Choice (C) is wrong because while it mentions other methods, comparing them is not the main point. Choice (D) is too specific; the passage is about the book's contribution, not a detailed history of folklore.

Question 3

Correct Answer: C

The underlined sentence states that magnetostratigraphy is useful for dating rocks without fossils or materials for radiometric dating, thus explaining its importance and application. This matches choice (C). Choice (A) is incorrect because the preceding sentence clarifies how magnetic reversals are recorded. Choice (B) is incorrect as the passage doesn't name specific

magnetic minerals. Choice (D) is incorrect because the sentence highlights the utility, not a limitation, of the technique.

Question 4

Correct Answer: A

The passage discusses fungal infections and mentions new drugs and research targeting fatty acid production, which are recent developments and promising approaches in treating these infections. (B) is incorrect because while the passage mentions some types of fungal infections, it does not explain their prevalence. (C) is incorrect because while the passage mentions challenges, it focuses more on the new solutions. (D) is incorrect because the passage does not discuss funding or advocate for it.

Question 5

Correct Answer: A

The passage talks about why spider silk is strong and how it could be used to make new things. (A) says the same thing: it explains why spider silk is special and how it could be used in technology. (B) is too narrow because the passage talks about more than just comparing spider silk to steel and Kevlar. (C) is too narrow because the passage discusses more than just how spiders make silk. (D) is incorrect because the passage does not argue for more research; it just talks about the potential uses.

Question 6

Correct Answer: A

The passage talks about how Roman roads were built and how they were important for the Roman Empire. (A) says the passage describes the building and importance of Roman roads, which is correct. (B) is wrong because the passage says the roads contributed significantly, but not that

they were the *most* important factor. (C) is wrong because the passage doesn't compare Roman roads to modern ones. (D) is wrong because while the passage mentions military use, it doesn't detail specific military campaigns.

Question 7

Correct Answer: A

The passage talks about what enzymes are and how scientists study them using enzyme kinetics. (A) says the main purpose is to explain what enzymes are and how they are studied, which matches the passage. (B) is incorrect because the passage explains enzyme kinetics but doesn't argue for its importance. (C) is incorrect because the passage mentions enzymes lower activation energy but doesn't describe the specific mechanism. (D) is incorrect because the passage doesn't compare different types of enzymes.

Question 8

Correct Answer: C

The passage explains how plants protect themselves from harmful UV-B radiation. It mentions how they make special compounds like flavonoids, repair damaged DNA, and create antioxidants. (C) talks about these ways plants protect themselves. (A) is wrong because the passage does not talk about the history of plant changes or other stresses. (B) is wrong because the passage does not describe the detailed structure of the chemicals. (D) is wrong because the passage does not say UV-B is the biggest threat compared to other radiation.

Question 9

Correct Answer: D

The passage starts by describing how a research study was conducted (design and execution), then states what the study found (outcome), and finally discusses what the findings suggest for the future (implications). This matches the structure described in (D). (A) is incorrect because there is no discussion of historical context. (B) is incorrect because while it mentions methodology and findings, it doesn't focus on the theoretical basis. (C) is incorrect as the passage presents research findings, not anecdotal evidence or personal reflection.

Question 10

Correct Answer: C

The passage talks about how scientists analyze volcanic gases using different tools. It also explains how this analysis helps them understand what is happening inside volcanoes and predict eruptions. (C) matches this idea. (A) is wrong because the passage mentions climate influence but doesn't argue about it being the main reason for monitoring. (B) is wrong because while it lists different methods, it doesn't compare how well they work. (D) is wrong because the passage focuses on analyzing gases to understand the volcano, not the chemical reactions after emission.

Question 11

Correct Answer: A

The passage talks about Edvard Westermarck's idea called the *Westermarck effect*. It says this idea explains why people who grow up together don't find each other attractive, which helps avoid inbreeding. It also mentions studies that show this idea is true. (A) matches this by saying the text explains the idea about avoiding incest and gives proof. (B) is wrong because the passage doesn't talk about other ideas. (C) is wrong because the passage doesn't say it's the only reason. (D) is wrong because the passage only talks about one idea from Westermarck's work, not all of it.

Question 12

Correct Answer: D

The passage talks about Sandra Postel's book *Replenish* and her idea that we should work with nature to manage water instead of fighting it. It also mentions examples from her book that show how this approach works. Therefore, the main point is to present her idea and the examples that support it. (A) is wrong because the passage does not tell you to support those projects. (B) is wrong because criticizing is not the main point; the main point is to suggest a new way. (C) is wrong because her background is only mentioned to show she is an expert, but her background is not the main topic.

Question 13

Correct Answer: A

The passage talks about a study that looked at how climate risks in cities make housing cost more and push out people who don't have much money. This matches option (A) which says the text shows research about climate risks causing people to be pushed out because of social and money reasons in cities. Option (B) is wrong because the passage doesn't tell cities what to do. Option (C) is wrong because the passage describes the study but doesn't say if the way they did the study was good or bad. Option (D) is wrong because the passage doesn't ask for new rules to help people affected by climate change.

Question 14

Correct Answer: D

The passage talks about what geothermal energy is and different ways it can be used, like for power plants and heating buildings. It also mentions some good things about using geothermal energy. This means the main

purpose is to give a general idea of geothermal energy and what it is used for. (A) is wrong because the passage doesn't strongly argue for using geothermal energy everywhere, it just mentions some benefits. (B) is wrong because the passage names different systems but doesn't compare how well they work. (C) is wrong because the passage doesn't talk about the history of how these methods were developed.

Question 15

Correct Answer: A

The passage explains that hibernation is a state animals use to survive winter. It then says that climate change causes animals to wake up too early, which is bad for them because there might not be food and it could still be too cold. This shows the main purpose is to explain how climate change hurts hibernating animals.

(B) is wrong because while the passage mentions some physiological changes, it's not the main focus.

(C) is wrong because while the passage implies hibernation is important, it doesn't argue for its importance.

(D) is wrong because the passage doesn't discuss different types of hibernating animals.

Question 16

Correct Answer: A

The passage introduces GLP-1 and GLP-2 as two related peptides. It explains that they come from the same source (proglucagon gene and L-cells) but have different effects on lipid handling. It also mentions research, like the studies in hamsters, that demonstrates these effects. This matches the description in choice (A). Choice (B) is incorrect because the passage does not propose a new hypothesis. Choice (C) is incorrect because the passage does not present a problem and solutions. Choice (D) is incorrect

because the passage does not outline the history of research into the gene or focus on therapeutic applications.

Question 17

Correct Answer: C

The passage describes eutrophication and its effects. The underlined sentence explains how the decomposition of dead algae and plants uses up oxygen, which is a key part of how algal blooms harm aquatic life. (C) accurately describes this function by stating it explains a critical step in the negative impact process. (A) is incorrect because the underlined sentence describes an effect of eutrophication, not its causes. (B) is incorrect because the sentence continues to describe negative effects, not a contrasting perspective. (D) is incorrect because the sentence focuses on the scientific process, not on arguing for policy changes.

Question 18

Correct Answer: A

The passage starts by introducing Realism as an art movement. It then describes what Realist painters aimed to do, which are the key characteristics of the movement. Finally, it discusses Gustave Courbet and his work as an example of a prominent artist within Realism. This matches the structure described in (A). (B) is incorrect because the passage does not discuss the decline of Realism. (C) is too broad; the passage focuses on an art movement, not a general cultural phenomenon, and it doesn't explore its impact on various disciplines. (D) is incorrect because the passage discusses an art movement, not a specific artistic technique.

Question 19

Correct Answer: A

The passage talks about how fungi and plants help each other, with fungi getting food from plants and plants getting nutrients from fungi. It also talks about how these fungi connect plants and help the ecosystem. (A) says the same thing, explaining the helpful relationship and why it matters for nature. (B) is wrong because the passage only mentions the term "wood wide web" as a nickname; it doesn't try to prove if the name is good or bad. (C) is wrong because the passage doesn't talk about how hard it is to study these fungi. (D) is wrong because the passage doesn't ask people to protect fungi, even though it says fungi are important.

Question 20

Correct Answer: C

The passage talks about extremophiles and how studying them helps us understand life on Earth and potentially find life elsewhere. It also mentions that extremophiles have special parts (enzymes) that can be used in jobs and making medicines. So, the main point is that extremophiles are important for science and can be used in helpful ways.

(A) is wrong because the passage doesn't focus on how extremophiles changed the definition of life.

(B) is wrong because the passage doesn't list different types of extremophiles or their homes.

(D) is wrong because the passage only briefly mentions adaptations but doesn't give a detailed explanation.