Craft and Structure

Question 1

Antibiotic resistance in bacteria is a significant threat to public health. Bacteria can develop resistance through several mechanisms, broadly categorized as intrinsic or acquired. Intrinsic resistance is a natural property of certain bacterial species, like the inherent resistance of *Mycobacterium tuberculosis* to rifampicin, often due to chromosomal mutations or structural features. Acquired resistance, on the other hand, results from genetic changes or the acquisition of resistance genes from other bacteria via horizontal gene transfer, including conjugation, transduction, and transformation. These mechanisms allow bacteria to evade the effects of antibiotics, such as by altering the drug target, inactivating the antibiotic molecule, or pumping the drug out of the cell.

Which choice best states the main purpose of the text?

A. To argue that intrinsic resistance in bacteria is a greater threat than acquired resistance.

B. To describe the principal ways in which bacteria develop resistance to antibiotics.

C. To explain the difference between bacterial resistance to antibiotics and viral resistance to antiviral drugs.

D. To advocate for new research into overcoming antibiotic resistance in specific bacterial species.

Question 2

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 3

The structure of DNA, a double helix, is fundamental to its function in carrying genetic information. This structure, with its complementary base pairing rules (adenine with thymine, and guanine with cytosine), allows for precise replication and transcription. The sequence of these nucleotide bases along the sugar-phosphate backbone encodes the instructions for building and maintaining an organism. Errors in this sequence, known as mutations, can alter protein function and lead to various genetic conditions. Understanding DNA's molecular architecture has revolutionized fields from medicine to forensics, providing unprecedented insights into biological processes and hereditary patterns.

Which choice best states the main purpose of the text?

A. To argue for the importance of studying DNA structure in scientific research.

B. To detail the process of DNA replication and transcription.

C. To explain the causes and consequences of DNA mutations.

D. To describe the structure of DNA and its significance in biological information.

Question 4

Cognitive Load Theory (CLT), introduced by John Sweller in 1988, posits that working memory has a limited capacity and that instructional methods should minimize extraneous cognitive load to optimize learning. Sweller argued that conventional problem-solving techniques often impose a high cognitive load, hindering the acquisition of schemas in long-term memory. Extraneous cognitive load is that which is generated by the way information is presented and does not aid learning. By reducing extraneous load, more working memory capacity becomes available for germane load, which is the cognitive effort leading to schema formation. Therefore, instructional designs should aim to reduce unnecessary mental effort.

Which choice best describes the overall structure of the text?

A. It defines a psychological theory, then provides experimental evidence supporting it.

B. It presents a historical overview of a concept, then discusses its modern applications.

C. It introduces a cognitive model, then argues for its widespread acceptance in the field.

D. It defines a theory, then explains a key implication of that theory for a specific domain.

Question 5

Photosynthesis, the process by which plants convert light energy into chemical energy, relies on pigments that absorb specific wavelengths of light. Chlorophylls are the primary pigments, absorbing strongly in the blue-violet and red regions of the spectrum. Chlorophyll a is directly involved in light-dependent reactions, while chlorophyll b acts as an accessory pigment, broadening the range of light captured. Carotenoids are another group of accessory pigments; they absorb light mainly in the blue-violet and blue-green regions and appear yellow, orange, or red because they reflect those colors. These pigments work together to maximize light absorption for photosynthesis.

Which choice best states the main purpose of the text?

A. To argue that chlorophyll a is the most important pigment in photosynthesis due to its direct role in light-dependent reactions.

B. To describe the roles of different pigments in capturing light for photosynthesis.

C. To explain how the absorption spectra of chlorophylls and carotenoids are measured.

D. To compare the chemical structures of chlorophylls and carotenoids and relate them to their functions.

Question 6

Protein synthesis, the creation of proteins within cells, is a fundamental biological process. This complex operation involves several stages, including initiation, elongation, and termination. The initiation phase in eukaryotes is critically dependent on the amino acid methionine. Typically, the ribosome, the cellular machinery responsible for protein synthesis, recognizes a specific start codon on the messenger RNA (mRNA) molecule, which signals where to begin translating the genetic code. This start codon is almost universally AUG, and it is recognized by an initiator transfer RNA (tRNA) molecule carrying methionine. However, research, such as studies by Tatiana Pestova and colleagues, has explored exceptions to this rule, investigating instances where initiation might occur at non-AUG codons or with amino acids other than methionine.

Which choice best states the main purpose of the text?

A. To argue that the role of methionine and AUG codons in protein synthesis initiation is not as significant as previously thought.

B. To explain the entire process of protein synthesis, from initiation to termination, in eukaryotic cells.

C. To advocate for further research into non-AUG initiated protein synthesis in eukaryotes.

D. To describe the standard mechanism of protein synthesis initiation in eukaryotes and mention research exploring variations to this mechanism.

Question 7

Geobacter sulfurreducens is a bacterium known for its ability to perform extracellular electron transfer (EET), which allows it to respire using extracellular electron acceptors like metal oxides or electrodes. This process is crucial for its survival in anaerobic environments and has garnered significant interest for its potential in bioelectrochemical systems. Research has identified key protein components involved in EET, such as multiheme c-type cytochromes and conductive pili, which form electron conduits extending from the cell. Studies utilizing techniques like cyclic voltammetry and gene deletion have helped elucidate the complex pathways and mechanisms by which *G. sulfurreducens* efficiently transfers electrons across its cell membranes to external substrates.

Which choice best states the main purpose of the text?

A. To detail the specific industrial applications of *Geobacter sulfurreducens* in bioelectrochemical systems.

B. To provide an overview of *Geobacter sulfurreducens*'s extracellular electron transfer process and the research investigating it.

C. To argue for the superiority of *Geobacter sulfurreducens*'s electron transfer mechanism compared to other bacteria.

D. To describe the evolutionary history of *Geobacter sulfurreducens* and its adaptation to anaerobic environments.

Question 8

Passage 1:

Literary critic Alfred Kazin, in *F. Scott Fitzgerald: The Man and His Work* (1951), argued that *The Great Gatsby* functions primarily as a social commentary. Kazin posits that Fitzgerald was deeply concerned with the moral decay and superficiality of the wealthy elite in the Roaring Twenties. He views Jay Gatsby as an embodiment of the corrupted American Dream, his pursuit of wealth and Daisy Buchanan highlighting the era's misplaced values and ethical compromises. Kazin's analysis emphasizes the novel's critique of a society obsessed with material possessions and social status over genuine human connection.

Passage 2:

In his 1945 introduction to *The Great Gatsby*, Lionel Trilling offered a different perspective. While acknowledging the novel's social observations, Trilling emphasized Gatsby's symbolic significance beyond just a critique of wealth. Trilling saw Gatsby as a figure representing a fundamental American hope and imagination, an "extraordinary gift for hope" that is ultimately thwarted by the harsh realities of the world. His interpretation suggests that the novel is less about the decline of a specific social class and more about the tragic fate of a uniquely American idealism.

Based on the texts, how would Trilling (Text 2) most likely respond to Kazin's (Text 1) analysis of Jay Gatsby?

A. He would agree that Gatsby is solely a symbol of the moral decay of the wealthy.

B. He would argue that Kazin overlooks the novel's detailed depiction of 1920s society.

C He would contend that Gatsby represents something more profound than just the corruption of the American Dream.

D He would suggest that Kazin's focus on social commentary is irrelevant to the novel's true meaning.

Question 9

Social norms are the unwritten rules that govern behavior in a society or group. They are not codified laws but rather the shared expectations and understandings that guide how individuals interact. Research by sociologists like Émile Durkheim highlighted how these norms contribute to social order and cohesion. More recent studies, such as those examining cultural influences on economic decisions, demonstrate the pervasive impact of these norms on individual choices, often in ways that agents themselves may not fully recognize. For instance, experimental economics has shown that norms of fairness can override purely rational self-interest in bargaining games. This indicates that social norms are powerful determinants of behavior, operating through internalized values and the anticipation of social sanctions or approval.

Which choice best describes the overall structure of the text?

A. It defines a social concept, then argues against its significance in modern research.

B. It defines a social concept, then discusses research that illustrates its influence on behavior.

C. It presents a historical perspective on a social phenomenon, then analyzes its biological basis.

D. It introduces a sociological theory, then provides an example of a study that refutes it.

Question 10

Cephalopods, such as octopuses, squids, and cuttlefish, are masters of rapid and complex skin coloration changes. This remarkable ability is primarily facilitated by specialized organs called chromatophores. Unlike the melanocytes found in mammals and birds, which rely on pigment concentration changes within a single cell, cephalopod chromatophores are complex neuromuscular organs. Each unit consists of a sacculus containing pigment granules, surrounded by a ring of radial muscles. Neural signals from the brain control the contraction and relaxation of these muscles, which in turn expand or contract the sacculus, altering the visible color and pattern. This allows for a dynamic range of visual displays used for camouflage and communication.

Which choice best states the main purpose of the text?

A. To explain the biological mechanism behind cephalopods' ability to change skin color.

B. To compare and contrast cephalopod chromatophores with mammalian melanocytes.

C. To discuss the various uses of color change in cephalopod behavior.

D. To highlight the complexity of neural control in cephalopod chromatophores.

Question 11

In the study “A Global Carbon Price: The Next Step in Climate Change Policy,” researchers from the International Monetary Fund proposed implementing a global carbon price floor as a means to mitigate climate change. They analyzed the economic impact and emissions reductions potential of different carbon price levels ($25, $50, and $75 per ton of CO2 by 2030) for a diverse group of 115 countries. The study concluded that even a modest carbon price floor, differentiated according to countries' development levels, could significantly reduce global emissions and mobilize substantial revenue, without necessarily hindering economic growth. They emphasized the need for international cooperation and equitable distribution of the generated revenue to ensure a just transition.

Which choice best states the main purpose of the text?

A. To advocate for a specific carbon price level to be adopted globally.

B. To criticize the current approaches to climate change mitigation efforts.

C. To summarize a study's findings and proposal regarding a global carbon price floor.

D. To explain the complex economic models used to analyze carbon pricing impacts.

Question 12

Cichlid fish, a diverse group of freshwater fish, exhibit remarkable variations in parental care strategies, ranging from no care to biparental guarding and mouthbrooding. Studies using phylogenetic analyses, such as those by Kuwamura (1997) and a 2019 study by Vági, Végvári, Liker, Freckleton, & Székely, have investigated the evolutionary transitions between these care patterns. While traditional views emphasized parental investment as the primary driver of sexual selection, more recent research, including work by Balshine-Earn & Earn (2008), proposes that sexual selection itself can shape the evolution of parental care. This suggests a complex interplay where the intensity of sexual selection can influence which sex provides care, and how that care is administered, leading to diverse reproductive behaviors observed in cichlids.

Which choice best states the main purpose of the text?

A. To argue against the traditional view that parental investment is the primary driver of sexual selection in cichlid fish.

B. To discuss research on the factors influencing the evolution of diverse parental care strategies in cichlid fish.

C. To explain the different types of parental care observed in cichlid fish and their geographical distribution.

D. To advocate for further research into the genetic mechanisms underlying parental care in cichlid fish.

Question 13

Supernova remnants (SNRs) are the structures formed by the powerful explosion of a star. These remnants are crucial for understanding our galaxy's evolution. SNRs heat the interstellar medium (ISM), distribute heavy elements created during the supernova throughout the galaxy, and are believed to accelerate galactic cosmic rays. Different types of SNRs, such as shell-like and composite, exhibit varied morphologies and emission characteristics across the electromagnetic spectrum, depending on factors like the progenitor star, explosion conditions, and the density of the surrounding ISM. The study of SNRs through various telescopes and observational techniques provides insights into the life cycle of stars, physical processes in extreme environments, and the chemical enrichment of the universe.

Which choice best states the main purpose of the text?

A. To argue that studying supernova remnants is the most effective way to understand the life cycle of stars.

B. To explain the importance of studying supernova remnants for understanding galactic processes and stellar evolution.

C. To describe the different types of supernova remnants and the specific characteristics of each type.

D. To detail the various observational techniques used by astronomers to study supernova remnants.

Question 14

In the study of Renaissance art, the symbolic use of color is a recurring subject of scholarly inquiry. While red often signified passion, sacrifice, or martyrdom, and white was associated with purity or innocence, the application of blue carried particular weight. Derived from the precious pigment lapis lazuli, blue was exceedingly costly, often exceeding the price of gold. Consequently, its use was frequently reserved for depictions of significant figures, most notably the Virgin Mary, symbolizing divinity, heavenly grace, and also reflecting the patron's wealth and devotion. This deliberate choice of pigment and its placement within a composition underscores the complex interplay of theological meaning, artistic technique, and economic realities in Renaissance painting.

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

A. It explains the reasons behind the specific and limited use of a particular color in Renaissance art.

B. It analyzes the symbolic meanings of various colors used in Renaissance art beyond the scope of blue.

C. It challenges a common misconception about the affordability of blue pigments during the Renaissance period.

D. It provides historical context for the artistic techniques used to apply blue paint in Renaissance masterpieces.

Question 15

Passage 1:

Researchers have long been fascinated by the coordinated movements of large animal groups, such as bird flocks and fish schools. A 2005 study led by Iain Couzin demonstrated through simulations that this complex collective behavior can arise from simple, local interactions between individuals. The model required only two basic rules: individuals tend to stay near others without colliding, and some individuals may have a preferred direction. These simple, local interactions were sufficient to generate coordinated group movement resembling that observed in nature.

Passage 2:

Subsequent research into animal collective behavior has investigated the nature of the local interactions proposed by early models. A 2007 field study involving starling flocks revealed that interactions might not depend on metric distance (physical proximity) but rather on topological distance—a fixed number of neighbors. This suggests that each bird coordinates with a specific number of nearby individuals, regardless of how far away they are, implying that simple, local rules are indeed fundamental but may operate based on social relationships rather than strict distance.

Based on the texts, which statement best describes a difference in the focus of the research discussed in Text 1 and Text 2?

A. Text 1 focuses on the sensory mechanisms animals use to detect neighbors, while Text 2 focuses on the cognitive processes involved in decision-making within a group.

B. Text 1 investigates the external stimuli that trigger collective behavior, while Text 2 examines the evolutionary advantages of flocking and schooling.

C Text 1 uses computer simulations to model collective behavior, while Text 2 relies solely on field observations of animal groups.

D Text 1 proposes that simple, local interactions can explain collective behavior, while Text 2 explores the specific *nature* of those local interactions.

Question 16

Albert Bandura's social cognitive theory posits that learning is a dynamic process involving the interaction of personal, behavioral, and environmental factors. Unlike strict behaviorism, which emphasizes external stimuli and reinforcement, Bandura's theory, also known as reciprocal determinism, highlights that individuals are not merely passive recipients of environmental influences. Instead, people actively influence their environment and their own behavior through their cognitive processes. For example, a student's belief in their ability to succeed (personal factor) can influence their study habits (behavioral factor), which in turn can lead to a positive learning environment (environmental factor). This ongoing, bidirectional relationship is central to understanding human learning and behavior within this framework.

Which choice best describes the overall structure of the text?

A. It introduces a psychological theory and then explains its core principle through contrasting it with another perspective and providing an example.

B. It presents a debate between two psychological theories and then offers evidence supporting one of them.

C. It describes a psychological phenomenon and then analyzes the historical development of theories explaining it.

D. It outlines a multi-component psychological model and then discusses its limitations in practical application.

Question 17

Studies on social influence often examine conformity, where individuals align their attitudes, beliefs, and behaviors with group norms. Solomon Asch's 1951 and 1956 experiments are foundational in this area. In his studies, participants were asked to match the length of a line segment to one of three comparison lines. Unbeknownst to the true participant, the others in the group were confederates instructed to give incorrect answers. Asch found that a significant percentage of participants conformed to the majority's wrong answers, even when the correct answer was obvious, demonstrating the powerful effect of social pressure on individual judgment. His work highlighted the distinction between public compliance and private acceptance.

Which choice best describes the overall structure of the text?

A. It defines a social phenomenon, then discusses a historical challenge to understanding that phenomenon.

B. It introduces a psychological concept, then explains how two different researchers studied that concept.

C. It describes a social science concept, then presents a classic study that illustrates that concept.

D. It outlines the results of an experiment, then offers an alternative interpretation of those results.

Question 18

Studies in social psychology often investigate how individuals are influenced by their social environment. One significant area of research focuses on conformity, the act of matching attitudes, beliefs, and behaviors to group norms. Solomon Asch's classic experiments in the 1950s demonstrated the power of conformity, showing that participants would often align their judgments with a majority, even when the majority opinion was clearly incorrect. His work involved participants being asked to match the length of lines, with confederates in the group giving incorrect answers. This research laid the groundwork for understanding how social pressure can override individual perception and judgment.

Which choice best describes the overall structure of the text?

A. It introduces a topic in social psychology, describes a key concept within that topic, and then discusses a foundational study illustrating the concept.

B. It presents a historical overview of social psychology, explains a controversial theory, and then argues for the theory's continued relevance.

C. It defines a psychological phenomenon, critiques a research methodology used to study it, and then proposes an alternative approach.

D. It discusses the results of a series of experiments, provides background information on the researchers, and then suggests future avenues of study.

Question 19

Ferdinand de Saussure, in his seminal work *Course in General Linguistics* (1916), fundamentally altered the study of language by proposing a structuralist approach. He argued that language is not merely a nomenclature—a system of labels for pre-existing concepts—but rather a system where meaning is generated through the relationships between linguistic signs. Central to his theory is the concept of the linguistic sign as a two-sided entity, comprising a "signifier" (the sound-image or written form) and a "signified" (the concept). The crucial insight is that the relationship between the signifier and the signified is arbitrary; there is no inherent or natural connection between a word like "tree" and the actual botanical object it represents. This arbitrariness highlights that the value of a sign is derived from its difference from other signs within the linguistic system, rather than from any external reality.

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

A. It offers a counterargument to Saussure's theory of the linguistic sign.

B. It elaborates on a key principle of Saussure's theory regarding the nature of the linguistic sign.

C. It provides an example of how the signifier and signified are inherently connected.

D. It discusses the historical development of the relationship between signifiers and signifieds.

Question 20

Stellar bars are elongated structures found in approximately two-thirds of disk galaxies and are believed to significantly influence galactic evolution. These bars are efficient at redistributing gas, stars, and angular momentum within their host galaxies. However, the precise impact of bars on star formation — whether they enhance or suppress it — remains a subject of ongoing research. A key tool used to investigate this ambiguity is the main sequence (MS) relation, which establishes a tight link between stellar mass (M"Æ) and star formation rate (SFR). Spatially resolved analyses, examining star formation on subkiloparsec scales, are crucial for understanding the relationship between bars and star formation processes within these galaxies.

Which choice best states the main purpose of the text?

A. To describe the role of stellar bars in galaxies and the methods used to study their effect on star formation.

B. To argue that stellar bars predominantly suppress star formation in disk galaxies, based on recent research.

C. To propose a new method for measuring the star formation rate in barred galaxies using the main sequence relation.

D. To discuss the historical development of research into the impact of stellar bars on galactic evolution.

Answers

Question 1

Correct Answer: B

The passage describes how bacteria become resistant to antibiotics. It mentions that bacteria can be naturally resistant or get resistance from other bacteria. It also talks about how bacteria can stop antibiotics from working. (A) is wrong because the passage does not say one type of resistance is a bigger threat. (C) is wrong because the passage only talks about bacteria, not viruses. (D) is wrong because the passage describes how resistance happens but doesn't ask for new research.

Question 2

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 3

Correct Answer: D

The passage talks about what DNA looks like and why it is important for living things. It describes the double helix and how it carries genetic information. This matches the idea of describing the structure of DNA and its importance. (A) is wrong because the passage does not try to convince

the reader to study DNA. (B) is wrong because the passage only mentions replication and transcription briefly without explaining the process. (C) is wrong because the passage only briefly mentions mutations.

Question 4

Correct Answer: D

The passage starts by defining Cognitive Load Theory and who introduced it. It then explains the concept of extraneous cognitive load and how minimizing it impacts learning. This explains a key implication of the theory (how to optimize learning) for a specific domain (instructional methods). (A) is incorrect because the passage does not provide experimental evidence. (B) is incorrect because it does not give a historical overview or discuss modern applications extensively. (C) is incorrect because it does not discuss the widespread acceptance of the model.

Question 5

Correct Answer: B

The passage talks about different pigments like chlorophyll a, chlorophyll b, and carotenoids. It explains how each helps capture light for photosynthesis. Therefore, the main purpose is to describe the roles of these pigments.

(A) is incorrect because while the passage mentions chlorophyll a's role, it doesn't argue it's the *most* important.

(C) is incorrect because the passage describes what wavelengths are absorbed, not how the measurements are taken.

(D) is incorrect because the passage mentions the functions but does not discuss the chemical structures of the pigments.

Question 6

Correct Answer: D

The passage talks about how protein making starts in cells. It explains the usual way it starts in eukaryotes, using methionine and AUG codons. Then, it mentions that some studies look at other ways it might start. (D) says the passage describes the usual way protein making starts and mentions studies about other ways, which is what the passage does. (A) is wrong because the passage doesn't say the usual way is not important. (B) is wrong because the passage only talks about the start of protein making, not the whole process. (C) is wrong because the passage doesn't ask for more research.

Question 7

Correct Answer: B

The passage talks about *Geobacter sulfurreducens*'s ability to transfer electrons outside its cell and how scientists are studying this process. The passage mentions the components involved and the research methods used. (B) accurately summarizes this. (A) is incorrect because while industrial applications are mentioned, they are not the main focus. (C) is incorrect because the passage does not compare *Geobacter sulfurreducens* 's mechanism to other bacteria. (D) is incorrect because the passage focuses on the current understanding of the electron transfer process, not its evolutionary history.

Question 8

Correct Answer: C

Text 1 says that Kazin thinks Gatsby is a symbol of the bad parts of rich people and the American Dream. Text 2 says that Trilling thinks Gatsby means something more about American hope, not just about rich people

being bad. So, Trilling would likely say that Kazin's idea is too simple and that Gatsby means more than just that.

(A) is wrong because Text 2 says Gatsby represents more than just the decay of the wealthy.

(B) is wrong because Text 2 doesn't say that Kazin ignores the description of the 1920s.

(D) is wrong because Text 2 doesn't say that social commentary is not important to the book.

Question 9

Correct Answer: B

The passage starts by defining what social norms are. Then, it mentions research by Durkheim and recent studies in experimental economics to show how social norms affect behavior. Therefore, the passage defines a concept and then discusses research illustrating its influence.

(A) is incorrect because the passage argues for the significance of social norms, not against it.

(C) is incorrect because the passage discusses sociological and economic perspectives, not biological ones.

(D) is incorrect because the passage provides examples that support the idea of social norms' influence, not refute a theory.

Question 10

Correct Answer: A

The passage explains how cephalopods change color using chromatophores, describing the parts of the chromatophore and how muscles and nerves control the pigment sac. This shows the passage's main purpose is to explain the mechanism. (B) is incorrect because while the passage mentions melanocytes, comparing them is not the main focus.

(C) is incorrect because while camouflage and communication are mentioned as uses, the passage doesn't elaborate on these uses. (D) is incorrect because although neural control is mentioned, the passage focuses on the entire biological mechanism, not just the neural aspect.

Question 11

Correct Answer: C

The passage talks about a study that looked at putting a price on carbon pollution everywhere. It tells what the study suggested and what it found out. The best answer is (C) because it says the text is summarizing the study's findings and what it suggested. (A) is wrong because the passage doesn't tell you to support a certain price, but instead talks about different prices the study looked at. (B) is wrong because the passage doesn't say that current efforts to stop climate change are bad. (D) is wrong because the passage doesn't explain the difficult math used in the study, it just tells what the study found.

Question 12

Correct Answer: B

The passage discusses how researchers have studied the evolution of parental care in cichlid fish and the factors that influence it, including both traditional and more recent ideas about sexual selection. Choice (A) is too narrow; the passage presents different views rather than solely arguing against one. Choice (C) mentions types of care but doesn't focus on geographical distribution. Choice (D) is not supported by the passage, which focuses on evolutionary factors, not genetic mechanisms. Therefore, the main purpose is to discuss the research on factors influencing the evolution of parental care in these fish.

Question 13

Correct Answer: B

The passage talks about supernova remnants and why studying them is important. It says they help us understand our galaxy, how stars live and die, and how elements spread. Choice (B) matches this idea because it says studying supernova remnants helps us understand galactic processes and how stars change.

Choice (A) is wrong because the passage doesn't say studying supernova remnants is the *most* effective way. Choice (C) is too narrow; the passage mentions different types but doesn't focus on detailing each one. Choice (D) is also too narrow; the passage mentions using telescopes but doesn't detail the techniques.

Question 14

Correct Answer: A

The underlined sentence explains why blue was used in a specific way in Renaissance art: it was expensive, so it was used for important figures like the Virgin Mary, which showed religious meaning and the patron's wealth. This is explaining the reasons for the specific use of blue. Therefore, the correct answer is (A). (B) is incorrect because the sentence focuses on blue, not various colors. (C) is incorrect because the sentence confirms, not challenges, the high cost of blue pigment. (D) is incorrect because the sentence discusses the symbolic use and economic factors, not the historical techniques of applying the paint.

Question 15

Correct Answer: D

Text 1 talks about how simple, local rules can make animals move together in groups. Text 2 then looks closer at what those simple rules might actually

be, specifically if they are about how close animals are or just about staying near a certain number of friends. So, Text 1 gives the big idea, and Text 2 tries to figure out more details about that idea. (A) is wrong because neither text talks about senses or thinking inside the animals. (B) is wrong because neither text talks about what starts the moving or why moving together helps animals over a long time. (C) is wrong because Text 2 also mentions using computer simulations.

Question 16

Correct Answer: A

The passage begins by introducing Albert Bandura's social cognitive theory. It then explains the core principle of this theory, reciprocal determinism, by contrasting it with behaviorism and providing an example of how the factors interact. This matches the description in option (A). Option (B) is incorrect because the passage doesn't present a debate or offer evidence for one theory over another; it focuses on explaining Bandura's theory. Option (C) is incorrect as it describes a theory and its principle, not the historical development of theories. Option (D) is incorrect because the passage does not discuss the limitations of the model.

Question 17

Correct Answer: C

The passage starts by defining conformity, which is a concept in social science. It then describes the Asch experiments as a classic study that illustrates this concept. Therefore, the structure is describing a concept and then presenting a study that illustrates it.

(A) is incorrect because the Asch experiments didn't challenge the understanding of conformity; they provided evidence for it.

(B) is incorrect because only one researcher, Solomon Asch, and his studies are discussed in detail.

(D) is incorrect because the passage does not offer an alternative interpretation of the results; it presents Asch's findings and their significance.

Question 18

Correct Answer: A

The passage begins by introducing social psychology and a topic within it (conformity). It then defines conformity and finally describes Asch's experiments as a foundational study illustrating the concept. Therefore, it introduces a topic, describes a concept, and then discusses a study. (A) matches this prediction. (B) is incorrect because the passage does not present a historical overview or argue for a theory's continued relevance. (C) is incorrect because it does not critique a research methodology or propose an alternative approach. (D) is incorrect because it does not discuss a series of experiments or suggest future avenues of study.

Question 19

Correct Answer: B

The first sentence introduces Saussure's theory of the linguistic sign. The underlined sentence states that the relationship between the signifier and signified is arbitrary and gives an example. This means the underlined sentence explains a main part of Saussure's idea about language. So, the underlined sentence elaborates on a key principle of Saussure's theory.

(A) is wrong because the sentence supports Saussure's theory, not argues against it.

(C) is wrong because the sentence states the relationship is arbitrary, not inherently connected.

(D) is wrong because the sentence focuses on the nature of the relationship at a given time, not its historical changes.

Question 20

Correct Answer: A

The passage talks about what stellar bars are in galaxies and how they might affect star formation. It also mentions that scientists use tools like the main sequence relation and detailed analysis to study this. (A) says the text describes the role of bars and how scientists study their effect on star formation, which matches what the passage does. (B) is wrong because the passage says it's unclear if bars increase or decrease star formation. (C) is wrong because the passage mentions the main sequence relation as a known tool, not a new one being proposed. (D) is wrong because the passage focuses on the current understanding and methods, not the history of the research.