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| 1. Identify three of the five basic themes in biology:  I. The cellular composition of life  II. The evolution of life  III. The interactions of living systems  IV. The mechanisms of disease  V. The transmission of information   |  |  |  | | --- | --- | --- | |  | a. | I, II, and III | |  | b. | II, III, and IV | |  | c. | III, IV, and V | |  | d. | I, IV, and V | |  | e. | II, III, and V |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.1 Major Themes of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.01 - Describe five basic themes of biology | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 2. Which statement best describes the cell theory?   |  |  |  | | --- | --- | --- | |  | a. | All living organisms grow and develop. | |  | b. | All living organisms respond to stimuli. | |  | c. | All living organisms are composed of basic units called cells. | |  | d. | All living organisms change locations to find food or to escape predators. | |  | e. | All living organisms can form a population of organisms. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 3. What statement best describes “biology”?   |  |  |  | | --- | --- | --- | |  | a. | The science of life | |  | b. | The naming of organisms | |  | c. | The study of natural selection | |  | d. | The measurement of populations | |  | e. | The study of how organisms are related to one another |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 4. By definition, an organism that is eukaryotic:   |  |  |  | | --- | --- | --- | |  | a. | is a protist | |  | b. | is unicellular | |  | c. | possesses a nucleus | |  | d. | possesses organ systems | |  | e. | belongs to the domain Bacteria |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Apply | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 5. What type of molecule carries the hereditary information of an organism?   |  |  |  | | --- | --- | --- | |  | a. | DNA | |  | b. | RNA | |  | c. | protein | |  | d. | nucleus | |  | e. | hormone |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 6. Which tool is used by researchers to rapidly and inexpensively edit genetic material?   |  |  |  | | --- | --- | --- | |  | a. | Morpholino | |  | b. | CRISPR | |  | c. | mGene | |  | d. | ORF FINDER | |  | e. | Veil |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.1 Major Themes of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.01 - Describe five basic themes of biology | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 7. In living organisms, chemical reactions responsible for growth, repair, and nutrition are collectively referred to as:   |  |  |  | | --- | --- | --- | |  | a. | development | |  | b. | metabolism | |  | c. | adaptation | |  | d. | genetics | |  | e. | homeostasis |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 8. The primary purpose of homeostasis is to:   |  |  |  | | --- | --- | --- | |  | a. | accept responses to stimuli | |  | b. | provide unlimited growth within an organism | |  | c. | allow unrestricted movement of an organism | |  | d. | convert an organism to live in a harmful environment | |  | e. | maintain a constant internal environment |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 9. Suppose a particular protein is produced in excess of the cellʼs needs. What kind of mechanism will intervene to stop production?   |  |  |  | | --- | --- | --- | |  | a. | growth | |  | b. | catabolic | |  | c. | metabolic | |  | d. | respiratory | |  | e. | homeostatic |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Apply | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 10. What is the purpose of the cilia and flagella of cells?   |  |  |  | | --- | --- | --- | |  | a. | They generate the cellʼs metabolism. | |  | b. | They provide movement for the cell. | |  | c. | They help maintain homeostasis. | |  | d. | They generate cell signaling. | |  | e. | They contract muscles. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 11. Which technology has been used to successfully deactivate specific human genes, modify yeasts for biofuel production, and modify agricultural crop?   |  |  |  | | --- | --- | --- | |  | a. | gene therapy | |  | b. | vectors | |  | c. | CRISPR/Cas9 | |  | d. | cell signaling | |  | e. | epigenetics |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.1 Major Themes of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.01 - Describe five basic themes of biology | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 12. Which stimulus most directly causes the Venus flytrap to catch an insect?   |  |  |  | | --- | --- | --- | |  | a. | gravity | |  | b. | light | |  | c. | touch | |  | d. | scent | |  | e. | sound |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 13. What is a distinct characteristic of asexual reproduction?   |  |  |  | | --- | --- | --- | |  | a. | fusion of egg and sperm | |  | b. | a cell splitting into identical halves | |  | c. | genes contributed by two parents | |  | d. | high degree of genetic variation | |  | e. | formation of a fertilized egg |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 14. Which is a benefit of sexual reproduction over asexual reproduction?   |  |  |  | | --- | --- | --- | |  | a. | More offspring are produced by the parents. | |  | b. | The offspring are all identical to the parents. | |  | c. | There is less variation from generation to generation. | |  | d. | Evolution occurs at a slower rate when there are two parents. | |  | e. | The interaction of the genes from both parents allows genetic variation. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 15. What is the smallest chemical unit that retains the characteristic properties of a given element?   |  |  |  | | --- | --- | --- | |  | a. | cell | |  | b. | atom | |  | c. | tissue | |  | d. | molecule | |  | e. | organism |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.3 Levels of Biological Organizations | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.03 - Construct a hierarchy of biological organization, including levels characteristic of individual organisms and levels characteristic of ecological systems. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 16. When tissues organize, what do they form?   |  |  |  | | --- | --- | --- | |  | a. | a cell | |  | b. | a nucleus | |  | c. | an atom | |  | d. | an organ | |  | e. | an enzyme |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.3 Levels of Biological Organization | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.03 - Construct a hierarchy of biological organization, including levels characteristic of individual organisms and levels characteristic of ecological systems. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 17. All members of the same species occupying the same area at the same time constitute a(n):   |  |  |  | | --- | --- | --- | |  | a. | individual | |  | b. | population | |  | c. | community | |  | d. | ecosystem | |  | e. | biosphere |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.3 Levels of Biological Organization | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.03 - Construct a hierarchy of biological organization, including levels characteristic of individual organisms and levels characteristic of ecological systems. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 18. CRISPR research can decrease the spread of what type of disease?   |  |  |  | | --- | --- | --- | |  | a. | cancer | |  | b. | HIV | |  | c. | heart disease | |  | d. | Zika and other mosquito-borne diseases | |  | e. | liver disease |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.1 Major Themes of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.01 - Describe five basic themes of biology | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 19. What are units of hereditary information?   |  |  |  | | --- | --- | --- | |  | a. | RNA | |  | b. | genes | |  | c. | proteins | |  | d. | hormones | |  | e. | nucleotides |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.4 Information Transfer | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.04 - Summarize the importance of information transfer within and between living systems, giving specific examples. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 20. Information in living organisms is transmitted by which mechanism(s)?   |  |  |  | | --- | --- | --- | |  | a. | genes only | |  | b. | hormones only | |  | c. | genes and hormones | |  | d. | neurotransmitters only | |  | e. | genes, hormones, and neurotransmitters |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.4 Information Transfer | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.04 - Summarize the importance of information transfer within and between living systems, giving specific examples. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 21. Which statement best describes autotrophic organisms?   |  |  |  | | --- | --- | --- | |  | a. | Autotrophs are exemplified by fungi and animals. | |  | b. | Autotrophs are exemplified by animals and bacteria. | |  | c. | Autotrophs cannot carry out cellular respiration during the day. | |  | d. | Autotrophs depend on heterotrophs for food and energy. | |  | e. | Autotrophs synthesize macromolecules from CO2, water, and energy. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 22. Which sequence represents the pattern of energy flow within an ecosystem?   |  |  |  | | --- | --- | --- | |  | a. | producers → consumers → decomposers | |  | b. | decomposers → producers → consumers | |  | c. | consumers → producers → decomposers | |  | d. | decomposers → consumers → producers | |  | e. | producers → decomposers → consumers |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Understand | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 23. Which process is most directly associated with the theory of evolution?   |  |  |  | | --- | --- | --- | |  | a. | Populations changing over time | |  | b. | Mutations changing the gene pool | |  | c. | Production of large numbers of offspring | |  | d. | Sexual reproduction producing genetic variation | |  | e. | Competition within a population for limited resources |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.08 - Give a brief overview of the scientific theory of evolution and explain why it is the principal unifying concept in biology. | | *KEYWORDS:* | Bloom's: Analyze | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 24. What is an end product of cellular respiration?   |  |  |  | | --- | --- | --- | |  | a. | sugar | |  | b. | light | |  | c. | oxygen | |  | d. | glucose | |  | e. | carbon dioxide |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 25. What would be the ultimate effect on an ecosystem if decomposers were eliminated?   |  |  |  | | --- | --- | --- | |  | a. | The rate of photosynthesis would increase. | |  | b. | The consumers would have to eat twice as much. | |  | c. | Energy flow between producers and consumers would increase. | |  | d. | All life would eventually cease due to a lack of available nutrients. | |  | e. | Producers would outgrow consumers. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Apply | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 26. Using the Linnaean system of nomenclature, corn is named *Zea mays*. What is the specific epithet in this name?   |  |  |  | | --- | --- | --- | |  | a. | *Zea mays* | |  | b. | *Zea* | |  | c. | *mays* | |  | d. | *Quercus* | |  | e. | corn |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.06 - Demonstrate the binomial system of nomenclature by using specific examples and classify an organism (such as a human) in its domain, kingdom, phylum, class, order, family, genus, and species. | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 27. Which organizational unit includes the fewest species of organisms?   |  |  |  | | --- | --- | --- | |  | a. | class | |  | b. | biosphere | |  | c. | community | |  | d. | population | |  | e. | ecosystem |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.3 Levels of Biological Organization | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.03 - Construct a hierarchy of biological organization, including levels characteristic of individual organisms and levels characteristic of ecological systems. | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 28. Similar families of organisms are next grouped together in the same:   |  |  |  | | --- | --- | --- | |  | a. | class | |  | b. | order | |  | c. | genus | |  | d. | phylum | |  | e. | kingdom |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.06 - Demonstrate the binomial system of nomenclature by using specific examples and classify an organism (such as a human) in its domain, kingdom, phylum, class, order, family, genus, and species. | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 29. You discover an organism that is eukaryotic, unicellular, and photosynthetic. Based on this evidence, to which group would you assign this organism?   |  |  |  | | --- | --- | --- | |  | a. | Bacteria | |  | b. | Protists | |  | c. | Fungi | |  | d. | Plantae | |  | e. | Archaea |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Analyze | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 30. An organism that is neither prokaryotic nor photosynthetic, and must obtain its nutrients by secreting digestive enzymes into the environment, belongs to which group of organisms?   |  |  |  | | --- | --- | --- | |  | a. | Bacteria | |  | b. | Protists | |  | c. | Fungi | |  | d. | Plantae | |  | e. | Animalia |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Analyze | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 31. One of the conclusions drawn from Darwinʼs theory of evolution is that:   |  |  |  | | --- | --- | --- | |  | a. | existing organisms can adapt to environmental changes | |  | b. | living organisms are composed of basic units called cells | |  | c. | living organisms contain substances produced by cells | |  | d. | genetic information can be passed from organism to organism | |  | e. | organisms living today descended from previously existing forms |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.08 - Give a brief overview of the scientific theory of evolution and explain why it is the principal unifying concept in biology. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 32. The human body is made up of specialized cells that perform different functions. For example, a neuron is a specialized cell of the nervous system that receives and transmits signals throughout the body. To perform these tasks, the neuron uniquely possesses branched protoplasmic protrusions, called dendrites and axons, which conduct the signals to and from its cell body. This illustrates which of the five major biological themes?   |  |  |  | | --- | --- | --- | |  | a. | interaction among biological systems | |  | b. | evolution | |  | c. | interrelation of structure and function in biological systems | |  | d. | activity of living cells | |  | e. | transmission of information within and among organisms |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.1 Major Themes of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.01 - Describe five basic themes of biology | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 33. In deductive reasoning, we begin with \_\_\_\_ and make \_\_\_\_ based on that information.   |  |  |  | | --- | --- | --- | |  | a. | premises; observations | |  | b. | observations; premises | |  | c. | observations; conclusions | |  | d. | observations; inductions | |  | e. | premises; conclusions |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Understand | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 34. Which cells do not have a nucleus or other membrane-enclosed organelles?   |  |  |  | | --- | --- | --- | |  | a. | eukaryotic cells | |  | b. | prokaryotic cells | |  | c. | protists | |  | d. | neurotransmitters | |  | e. | mutated cells |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 35. Which is a characteristic of a good hypothesis?   |  |  |  | | --- | --- | --- | |  | a. | It is falsifiable. | |  | b. | It is a statement of fact. | |  | c. | It can only be tested once. | |  | d. | It can be proven to be true. | |  | e. | It represents important conclusions. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 36. What are inherited characteristics that enhance an organismʼs ability to survive in its environment?   |  |  |  | | --- | --- | --- | |  | a. | biosphere | |  | b. | asexual reproduction | |  | c. | acellular levels | |  | d. | adaptations | |  | e. | DNA |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 37. During an experiment, what is the purpose of a control group?   |  |  |  | | --- | --- | --- | |  | a. | To allow the comparison of the results with previous experiments | |  | b. | To disprove the hypothesis | |  | c. | To prove the hypothesis | |  | d. | To replicate the results of the experimental group | |  | e. | To ensure that the results observed in the experimental group is due to the variable being tested |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 38. Suppose we want to examine the effect of a fertilizer on the size of zucchini produced, and therefore, we need to establish the experimental and control groups. The control group for this experiment would be defined under which conditions?   |  |  |  | | --- | --- | --- | |  | a. | soil, fertilizer, water, sun, but no zucchini seeds | |  | b. | soil, fertilizer, water, sun, and zucchini seeds | |  | c. | soil, water, sun, and no zucchini seeds | |  | d. | soil, water, sun, and zucchini seeds | |  | e. | soil, water, and sun |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Analyze | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 39. What is a subspecialty of systematics and is the science of naming and classifying organisms?   |  |  |  | | --- | --- | --- | |  | a. | binomial system of nomenclature | |  | b. | taxonomy | |  | c. | systems biology | |  | d. | cladogram | |  | e. | phyla |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 40. What is a branching diagram that depicts the relationships among organisms based on shared characteristics?   |  |  |  | | --- | --- | --- | |  | a. | cladogram | |  | b. | taxon | |  | c. | domains | |  | d. | Linnaean system | |  | e. | systematic hierarchy |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 41. Which statement concerning a scientific theory is FALSE?   |  |  |  | | --- | --- | --- | |  | a. | It is unchangeable. | |  | b. | It predicts new facts. | |  | c. | It is based on multiple hypotheses. | |  | d. | It may suggest practical applications. | |  | e. | It is supported by many observations. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 42. Consider the statement “biological systems interact.” What does this mean?   |  |  |  | | --- | --- | --- | |  | a. | Systems combine to reproduce. | |  | b. | Biological organisms are interdependent. | |  | c. | Structure and function are not interrelated. | |  | d. | Biological organisms are not interdependent. | |  | e. | Every organism is in conflict with other organisms. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.1 Major Themes of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.01 - Describe five basic themes of biology | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 43. Which best describes a result of sexual reproduction?   |  |  |  | | --- | --- | --- | |  | a. | The only source of variation is mutation. | |  | b. | Clones of the original cell are produced. | |  | c. | One cell divides to produce two identical cells. | |  | d. | Two sex cells combine to form a fertilized cell. | |  | e. | The offspring obtain genes from only one parent. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 44. A DNA molecule is made up of:   |  |  |  | | --- | --- | --- | |  | a. | lipids | |  | b. | proteins | |  | c. | nucleotides | |  | d. | fatty acids | |  | e. | carbohydrates |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *REFERENCES:* | 1.4 Information Transfer | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.04 - Summarize the importance of information transfer within and between living systems, giving specific examples. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 45. Which is a byproduct of photosynthesis?   |  |  |  | | --- | --- | --- | |  | a. | water | |  | b. | light | |  | c. | glucose | |  | d. | oxygen | |  | e. | carbon dioxide |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 46. To which phylum do humans belong?   |  |  |  | | --- | --- | --- | |  | a. | Animalia | |  | b. | Chordata | |  | c. | Vertebrata | |  | d. | Mammalia | |  | e. | *Homo sapiens* |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.06 - Demonstrate the binomial system of nomenclature by using specific examples and classify an organism (such as a human) in its domain, kingdom, phylum, class, order, family, genus, and species. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 47. Which scenario best describes a double-blind study?   |  |  |  | | --- | --- | --- | |  | a. | The investigator and the subjects wear blindfolds. | |  | b. | No one knows who is in the experimental or control groups | |  | c. | The subjects do not know if they are in the experimental or control groups. | |  | d. | Neither the investigator nor the subjects know who is in the experimental or control groups. | |  | e. | The investigator does not know if subjects are in the experimental or control groups. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 48. Using the characteristics that define life, compare and contrast a plant and a salt crystal.   |  |  | | --- | --- | | *ANSWER:* | **Cellular in structure:** A plant is cellular, but a salt crystal is not.  **Grow and develop:** A plant grows by increasing the size and number of cells in its multicellular body. The plant develops as it ages. A salt crystal can increase in size only by the addition of molecules and does not “develop” in the biological sense of the word.  **Regulate their metabolic processes:** Plants can regulate their metabolism; a salt crystal lacks metabolic processes.  **Respond to stimuli:** In plants (multicellular), specialized parts can respond in different ways to stimuli. A salt crystal cannot respond.  **Reproduce:** Plants can reproduce both sexually and asexually. A salt crystal cannot reproduce unless one accepts the breaking apart of a crystal as a type of reproduction.  **Evolve and adapt:** Plants can do both; salt crystals cannot. | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Analyze | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 49. Explain the flow of energy through ecosystems. Include a specific example of energy flow through an ecosystem.   |  |  | | --- | --- | | *ANSWER:* | The sun provides the primary source of energy for life on our planet. Plants and other autotrophs, called producers, convert the energy from the sun to produce organic compounds. Then, a group of heterotrophs, called consumers, use the organic compounds from the producers for energy. Finally, a second group of heterotrophs, called decomposers, consume the waste and remains from the consumers.  For example, in a swamp, the trees, other plants, and algae convert light to organic compounds. The fish that live in a swamp eat the algae and consume the oxygen released during cellular respiration by the algae. In return, the fish is eaten by alligators for energy. Finally, mushrooms decompose the waste from these animals. | | *POINTS:* | 1 | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Understand | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 50. Identify two adaptations in different organisms and explain how each may have evolved through natural selection.   |  |  | | --- | --- | | *ANSWER:* | Example 1: The long, flexible tongue of a frog is an adaptation for catching insects. In a population of frogs, genetic variation would exist with respect to tongue length. However, frogs with longer tongues are able to catch more insects than the short-tongued frogs, limiting their growth or even pushing them to starvation. Over many generations frogs with long tongues would likely thrive and produce more offspring than frogs with short tongues. Consequently, the long-tongue trait would become more prevalent in the population.  Example 2: The thick coat of the polar bear is an adaptation for surviving low temperatures. In a population of polar bears, genetic variation would exist among coat thickness. However, low temperatures would more adversely affect bears having a thinner coat. For example, they might be sickly, be less fertile, and even die before reproducing. Over many generations, bears with thicker coats would most likely thrive and produce more offspring than thin-coated bears. Consequently, the thick-coated trait would become more prevalent in the population. | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.08 - Give a brief overview of the scientific theory of evolution and explain why it is the principal unifying concept in biology. | | *KEYWORDS:* | Bloom's: Understand | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 51. Adaptation involves changes in ecosystem rather than in individual organism.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:38 PM | |

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| 52. All of the genes present in a population make up its gene pool**.**   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:39 PM | |

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| 53. An organism that reproduces asexually produces genetically variable offspring.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *REFERENCES:* | 1.2 Characteristics of Life | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.02 - Distinguish between living and nonliving things by describing the features that characterize living organisms | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:39 PM | |

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| 54. The scientific name for coffee is *Coffea arabica*. More specifically, the species name is *arabica*.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.06 - Demonstrate the binomial system of nomenclature by using specific examples and classify an organism (such as a human) in its domain, kingdom, phylum, class, order, family, genus, and species. | | *KEYWORDS:* | Bloom's: Apply | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:40 PM | |

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| 55. Similar orders are placed in the same class.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.06 - Demonstrate the binomial system of nomenclature by using specific examples and classify an organism (such as a human) in its domain, kingdom, phylum, class, order, family, genus, and species. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:40 PM | |

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| 56. The two domains of prokaryotes are Bacteria and Fungi.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:41 PM | |

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| 57. With deductive reasoning, you draw conclusions from specific observations.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:41 PM | |

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| 58. A falsifiable hypothesis cannot be tested.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:42 PM | |

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| 59. Changing your view of reality involves a paradigm shift.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:47 PM | |

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| 60. Systems biology is also called integrative biology.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.11 - Compare the reductionist and systems approaches to biological research. | | *KEYWORDS:* | Bloom's: Remember | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:47 PM | |

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| 61. On a scientific expedition into new territory, you discover a previously unknown organism living within the rainforest. This organism has a cell wall, is multicellular and heterotrophic, and has a nucleus. In what kingdom would you most likely place this organism and why?   |  |  | | --- | --- | | *ANSWER:* | **Concepts to Consider:** Characteristics of this organism indicate it is a eukaryote; its structure may indicate that it belongs to the kingdom Fungi. | | *POINTS:* | 1 | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Essay | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *TOPICS:* | Discussion or Thought Questions | | *KEYWORDS:* | Bloom's: Apply | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 62. Design a new organism (for example, a new species of bird, alligator, or plant) that is fit for a .swamp habitat. Explain how that organism would communicate with other organisms within that ecosystem and transmit information within itself and between generations.   |  |  | | --- | --- | | *ANSWER:* | **Concepts to Consider:** DNA and genes are involved in between generation communication, hormones and/or neurotransmitters within the organism, and visual or aural communication between organisms. | | *POINTS:* | 1 | | *REFERENCES:* | 1.4 Information Transfer | | *QUESTION TYPE:* | Essay | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *TOPICS:* | Discussion or Thought Questions | | *KEYWORDS:* | Bloom's: Evaluate | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 63. You place equal numbers of dark and light varieties of feeder crickets into a terrarium containing a lizard. After two days, you notice that there are fewer light-colored crickets than dark-colored crickets. What process is taking place on a small scale within the terrarium? Design an experiment in which you could determine if color or taste is the primary factor responsible for the selective feeding of the lizard.   |  |  | | --- | --- | | *ANSWER:* | **Concepts to Consider:** Natural selection, correct experimental design, and hypothesis testing. | | *POINTS:* | 1 | | *REFERENCES:* | 1.7 The Process of Science | | *QUESTION TYPE:* | Essay | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.10 - Design a study to test a given hypothesis, using the procedure and terminology of the scientific method. | | *TOPICS:* | Discussion or Thought Questions | | *KEYWORDS:* | Bloom's: Evaluate | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| *Match the organism to the role it plays in the energy cycle:*   |  |  | | --- | --- | | a. | primary producer | | b. | primary consumer | | c. | secondary consumer | | d. | decomposer |  |  |  | | --- | --- | | *REFERENCES:* | 1.5 The Energy of Life | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.05 - Summarize the flow of energy through ecosystems and contrast the roles of producers, consumers, and decomposers. | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | New | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 64. Fungi   |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | |

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| 65. Plant   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| 66. Bird   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 67. Caterpillar   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| *Match the group of organisms with the correct example.*   |  |  | | --- | --- | | a. | protists | | b. | plants | | c. | fungi | | d. | bacteria | | e. | animals |  |  |  | | --- | --- | | *REFERENCES:* | 1.6 Evolution: The Basic Unifying Concept of Biology | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BIO.SBM.01.07 - Identify the three domains and the kingdoms of living organisms, and give examples of organisms assigned to each group. | | *KEYWORDS:* | Bloom's: Understand | | *NOTES:* | Modified | | *DATE CREATED:* | 3/22/2018 2:36 PM | | *DATE MODIFIED:* | 3/22/2018 2:36 PM | |

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| 68. bread mold   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 69. chimpanzee   |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | |

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| 70. oak tree   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 71. prokaryotes   |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | |

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| 72. unicellular eukaryotes   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |