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| **Multiple Choice** |

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| 1. Hydrogenation is a \_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | manufacturing process that adds hydrogen atoms to carbohydrates | |  | b. | natural process that adds hydrogen atoms to carbohydrates | |  | c. | manufacturing process that adds hydrogen atoms to oils | |  | d. | natural process that removes hydrogen atoms from fats | |  | e. | manufacturing process that removes hydrogen atoms from fats |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.1 A Big Fat Problem | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.01 - Application | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 2. The human body requires about \_\_\_\_ of fat each day to stay healthy.   |  |  |  | | --- | --- | --- | |  | a. | one teaspoon | |  | b. | four teaspoons | |  | c. | one tablespoon | |  | d. | four tablespoons | |  | e. | one cup |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.1 A Big Fat Problem | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.01 - Application | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 3. The main source of *trans* fats in the American diet has been \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | red meat | |  | b. | dairy products | |  | c. | seafood | |  | d. | grains | |  | e. | vegetable oils |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.1 A Big Fat Problem | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.01 - Application | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 4. ​A typical fat molecule has \_\_\_\_ fatty acid tails.   |  |  |  | | --- | --- | --- | |  | a. | one​ | |  | b. | ​two | |  | c. | ​three | |  | d. | ​four | |  | e. | ​five |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.1 A Big Fat Problem | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.01 - Application | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 5. Which invention led to *trans* fats being marketed as a solid cooking fat?​   |  |  |  | | --- | --- | --- | |  | a. | the electric light​ | |  | b. | ​the telephone | |  | c. | ​the automobile | |  | d. | ​the microwave oven | |  | e. | ​the refrigerator |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.1 A Big Fat Problem | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.01 - Application | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 6. The atomic number is determined by the number of \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | protons​ | |  | b. | ​neutrons | |  | c. | ​electrons | |  | d. | protons plus neutrons​ | |  | e. | ​protons plus electrons |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 7. Carbon has an atomic number of 6. Carbon 14 has \_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | 6 neutrons and 6 protons | |  | b. | 6 neutrons and 8 protons | |  | c. | 8 neutrons and 6 protons | |  | d. | 14 neutrons and 6 protons | |  | e. | 14 protons and 6 neutrons |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 8. Tracers are used in what form of medical test?​   |  |  |  | | --- | --- | --- | |  | a. | PET scans​ | |  | b. | ​CT scans | |  | c. | ​sonograms | |  | d. | ​x-rays | |  | e. | ​MRI |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.03 - Describe radioactive decay. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 9. We can accurately determine the age of a rock or fossil by measuring its \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | proton concentration​ | |  | b. | ​electron concentration | |  | c. | ​neutron concentration | |  | d. | ​isotope concentration | |  | e. | ​ion concentration |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.03 - Describe radioactive decay. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 10. Helium, neon, and argon are \_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | extremely stable because they have vacancies in their outer shells | |  | b. | extremely stable because they do not have any vacancies in their outer shells | |  | c. | extremely unstable because they have vacancies in their outer shells | |  | d. | extremely unstable because they do not have any vacancies in their outer shells | |  | e. | extremely unstable because they have vacancies in their inner shells |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.04 - Use the concept of vacancies to explain the chemical activity of atoms. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 11. The nucleus of an atom contains \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | ​protons only | |  | b. | ​electrons only | |  | c. | ​neutrons only | |  | d. | ​protons and neutrons | |  | e. | protons and electrons​ |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 12. The negative subatomic particle is the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | neutron | |  | b. | proton | |  | c. | electron | |  | d. | quark | |  | e. | Higg’s boson |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 13. The positive subatomic particle is the \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | ​neutron | |  | b. | ​proton | |  | c. | ​electron | |  | d. | ​positron | |  | e. | ​quark |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 14. Oxygen has an atomic number of 8. This means that oxygen has \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | eight electrons in its outer most shell | |  | b. | eight neutrons in its nucleus | |  | c. | four protons and four neutrons in its nucleus | |  | d. | eight protons in its nucleus | |  | e. | eight protons and eight neutrons in its nucleus |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom's: Apply | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 15. The neutral subatomic particle is the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | neutron | |  | b. | proton | |  | c. | electron | |  | d. | quark | |  | e. | Higg’s boson |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 16. Carbon 14 radioisotopes decay into stable \_\_\_\_.​  nitrogen 15 isotopes   |  |  |  | | --- | --- | --- | |  | a. | carbon 13 isotopes​ | |  | b. | ​nitrogen atoms | |  | c. | carbon atoms​ | |  | d. | ​nitrogen 15 isotopes | |  | e. | ​sodium atoms |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.03 - Describe radioactive decay. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 17. An atom that carries a charge is called a(n) \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | ion​ | |  | b. | ​molecule | |  | c. | ​compound | |  | d. | ​element | |  | e. | ​microelement |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.04 - Use the concept of vacancies to explain the chemical activity of atoms. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 18. A(n) \_\_\_\_ is a type of chemical bond in which a strong mutual attraction forms between ions of opposite charge.​   |  |  |  | | --- | --- | --- | |  | a. | ​hydrogen bond | |  | b. | ​nonpolar bond | |  | c. | ​polar bond | |  | d. | ​covalent bond | |  | e. | ​ionic bond |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.01 - Describe a chemical bond. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 19. The bond in table salt (NaCl) is \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | polar​ | |  | b. | ​ionic | |  | c. | ​covalent | |  | d. | double​ | |  | e. | ​nonpolar |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.01 - Describe a chemical bond. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 20. In \_\_\_\_ bonds, atoms share electrons equally.​   |  |  |  | | --- | --- | --- | |  | a. | double​ | |  | b. | ionic​ | |  | c. | ​polar covalent | |  | d. | ​nonpolar covalent | |  | e. | ​hydrogen |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.01 - Describe a chemical bond. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 21. Which type of chemical bond is found within a water molecule?   |  |  |  | | --- | --- | --- | |  | a. | hydrogen | |  | b. | ionic | |  | c. | polar covalent | |  | d. | nonpolar covalent | |  | e. | triple |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.02 - Explain polarity in terms of ionic bonds and covalent bonds. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 22. The positively charged ion, potassium, and the negatively charged ion, fluoride, will form what kind of bond?​   |  |  |  | | --- | --- | --- | |  | a. | ​ionic | |  | b. | ​polar covalent | |  | c. | ​nonpolar covalent | |  | d. | ​hydrogen | |  | e. | ​isotonic |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.02 - Explain polarity in terms of ionic bonds and covalent bonds. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 23. Which of the following molecules would be considered a covalent compound?   |  |  |  | | --- | --- | --- | |  | a. | oxygen (O2) | |  | b. | sodium chloride (NaCl) | |  | c. | water (H2O) | |  | d. | a diamond (C) | |  | e. | ozone (O3) |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.01 - Describe a chemical bond. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 24. The structural formula for molecular oxygen is depicted as O=O. What kind of bond holds molecular oxygen together?​   |  |  |  | | --- | --- | --- | |  | a. | ionic​ | |  | b. | ​polar covalent | |  | c. | single covalent​ | |  | d. | ​double covalent | |  | e. | ​triple covalent |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.01 - Describe a chemical bond. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 25. Which substance is hydrophobic?​   |  |  |  | | --- | --- | --- | |  | a. | canola oil​ | |  | b. | ​sodium chloride | |  | c. | ​sugar | |  | d. | ​water | |  | e. | ​the potassium ion |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.03 - Describe the way an ionic substance dissolves in water. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 26. Fats will dissolve in ethanol. Ethanol is an example of a \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | solute​ | |  | b. | ​solution | |  | c. | ​solvent | |  | d. | ​salt | |  | e. | ​ion |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.03 - Describe the way an ionic substance dissolves in water. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 27. Which bond is weakest?​   |  |  |  | | --- | --- | --- | |  | a. | ionic​ | |  | b. | ​double covalent | |  | c. | ​polar covalent | |  | d. | ​nonpolar covalent | |  | e. | ​hydrogen |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 28. Water molecules are attracted to one another because the \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | slightly positive charge of the hydrogen atom from one molecule of water attracts the slightly negative charge of the oxygen atom from another molecule | |  | b. | slightly negative charge of the hydrogen atom from one molecule of water attracts the slightly negative charge of the oxygen atom from another molecule | |  | c. | slightly positive charge of the hydrogen atom attracts the oxygen within the same molecule of water, which leads to an increase in its polarity | |  | d. | water molecules participate in nonpolar covalent bonds, which increase the attraction of the molecules to each other | |  | e. | water molecules bind to each other through their mutual attraction to ionic compounds |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.02 - Draw a hydrogen bond between two water molecules. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 29. A solution is a uniform mixture in which a \_\_\_\_ is dissolved completely in a \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | salt; solute​ | |  | b. | ​solute; salt | |  | c. | ​solute; solvent | |  | d. | ​solvent; salt | |  | e. | ​solvent; solute |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.03 - Describe the way an ionic substance dissolves in water. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 30. Surface tension is an example of \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | ​hydrophobicity | |  | b. | ​concentration | |  | c. | ​evaporation | |  | d. | cohesion​ | |  | e. | ​polarity |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 31. Sweating to keep cool in the summer is the result of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | hydrogen bonds breaking to release energy | |  | b. | hydrogen bonds forming, which requires energy | |  | c. | evaporation of water absorbing energy | |  | d. | cohesion of water molecules giving off energy | |  | e. | cohesion of water molecules requiring energy |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 32. Hydrogen bonding \_\_\_\_ the movement of molecules, therefore, substances that form a lot of hydrogen bonds, like water, will require \_\_\_\_ energy to increase their temperature by one degree Celsius.   |  |  |  | | --- | --- | --- | |  | a. | decreases; less | |  | b. | decreases; more | |  | c. | does not affect; no additional | |  | d. | increases; less | |  | e. | increases; more |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Analyze | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 33. When water molecules form into ice, \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | the water molecules jiggle more​ | |  | b. | ​their structure becomes less rigid | |  | c. | ​the water molecules pack less densely | |  | d. | ​hydrogen bonds between water molecules readily break | |  | e. | ​evaporation of water molecules happens more readily |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 34. Hydrophobic molecules are \_\_\_\_ water.​   |  |  |  | | --- | --- | --- | |  | a. | attracted by​ | |  | b. | ​absorbed by | |  | c. | ​repelled by | |  | d. | ​mixed with | |  | e. | ​polarized by |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 35. \_\_\_\_ is the tendency of water molecules to stay attached to one another.​   |  |  |  | | --- | --- | --- | |  | a. | Adhesion​ | |  | b. | ​Cohesion | |  | c. | ​Fusion | |  | d. | ​Interaction | |  | e. | ​Junction |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 36. Which property of water molecules is responsible for movement of water from roots to leaves in a plant?​   |  |  |  | | --- | --- | --- | |  | a. | hydrophobicity​ | |  | b. | ​temperature stability | |  | c. | ​fusion | |  | d. | ​solvent polarity | |  | e. | ​cohesion |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Analyze | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 37. Glucose dissolves in water because it \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ionizes | |  | b. | is a polysaccharide | |  | c. | is polar and forms many hydrogen bonds with water molecules | |  | d. | has a very reactive primary structure | |  | e. | is an isotope |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Analyze | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 38. A uniform mixture is called a \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | ​concentration | |  | b. | ​salt | |  | c. | ​solute | |  | d. | ​solution | |  | e. | ​solvent |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 39. A solution at a pH of 10 contains how many times more hydrogen ions than a solution at a pH of 7?​   |  |  |  | | --- | --- | --- | |  | a. | ​2 | |  | b. | ​3 | |  | c. | ​10 | |  | d. | ​100 | |  | e. | ​1,000 |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.5 Acids and Bases | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.05.01 - Define pH. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 40. Of these pH values, which has the highest concentration of hydrogen ions?   |  |  |  | | --- | --- | --- | |  | a. | 1 | |  | b. | 3 | |  | c. | 5 | |  | d. | 7 | |  | e. | 9 |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.5 Acids and Bases | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.05.01 - Define pH. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 41. Nearly all of life’s chemistry occurs near a pH range of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | 1–2 | |  | b. | 3–4 | |  | c. | 5–6 | |  | d. | 7–8 | |  | e. | 9–10 |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.5 Acids and Bases | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.05.01 - Define pH. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 42. What category of compounds helps our body fluids to stay within a consistent pH range?​   |  |  |  | | --- | --- | --- | |  | a. | solvents​ | |  | b. | ​buffers | |  | c. | ​solutes | |  | d. | ​acids | |  | e. | ​bases |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.5 Acids and Bases | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.05.03 - Describe the way that buffers work. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 43. \_\_\_\_ is one of the substances that maintains our blood pH between 7.35 and 7.45.​   |  |  |  | | --- | --- | --- | |  | a. | Water​ | |  | b. | ​Carbonic acid | |  | c. | ​Hydrochloric acid | |  | d. | ​Hydrogen peroxide | |  | e. | ​Sodium hydroxide |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.5 Acids and Bases | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.05.03 - Describe the way that buffers work. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 44. Which two atoms are found in all organic compounds?​   |  |  |  | | --- | --- | --- | |  | a. | carbon and hydrogen​ | |  | b. | ​carbon and oxygen | |  | c. | ​oxygen and hydrogen | |  | d. | ​carbon and phosphorous | |  | e. | ​oxygen and sulfur |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.01 - Explain the basic structure of an organic molecule. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 45. Which is an organic molecule?​   |  |  |  | | --- | --- | --- | |  | a. | carbon dioxide (CO2)​ | |  | b. | ​water (H2O) | |  | c. | ​methane (CH4) | |  | d. | ​hydrochloric acid (HCl) | |  | e. | ​oxygen (O2) |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.01 - Explain the basic structure of an organic molecule. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 46. Large polymers are formed from smaller subunits by which type of reaction?​   |  |  |  | | --- | --- | --- | |  | a. | oxidation​ | |  | b. | ​reduction | |  | c. | ​condensation | |  | d. | ​hydrolysis | |  | e. | ​decarboxylation |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.03 - Explain how the molecules of life are polymers. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 47. The breakdown of large molecules by enzymes and the addition of water is known as a \_\_\_\_ reaction.​   |  |  |  | | --- | --- | --- | |  | a. | oxidation​ | |  | b. | ​reduction | |  | c. | ​condensation | |  | d. | ​hydrolysis | |  | e. | ​decarboxylation |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.04 - Give an example of a metabolic reaction. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 48. The chemical reactions that cells use to acquire and use energy to live, grow, and reproduce are called \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | hydrolysis | |  | b. | condensation | |  | c. | phosphorylation | |  | d. | metabolism | |  | e. | oxidation |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.04 - Give an example of a metabolic reaction. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 49.  ​  How many carbons are present in this figure?   |  |  |  | | --- | --- | --- | |  | a. | zero | |  | b. | four | |  | c. | five | |  | d. | six | |  | e. | seven |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.01 - Explain the basic structure of an organic molecule. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 50. Which organic molecule is a carbohydrate monomer?   |  |  |  | | --- | --- | --- | |  | a. | triglyceride | |  | b. | fatty acid | |  | c. | nucleotide | |  | d. | amino acid | |  | e. | monosaccharide |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.6 The Chemistry of Biology | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.06.01 - Explain the basic structure of an organic molecule. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 51. Glucose monomers linked into a highly branched chain make up \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | glycogen​ | |  | b. | ​cellulose | |  | c. | ​fructose | |  | d. | ​starch | |  | e. | ​sucrose |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.01 - Describe the structure of carbohydrates and explain their roles in cells. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 52. Sucrose is composed of \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | two molecules of fructose​ | |  | b. | ​two molecules of glucose | |  | c. | ​a molecule of fructose and a molecule of glucose | |  | d. | ​a molecule of fructose and a molecule of galactose | |  | e. | ​two molecules of galactose |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.01 - Describe the structure of carbohydrates and explain their roles in cells. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 53. Plants store their excess carbohydrates in the form of \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | cellulose​ | |  | b. | ​starch | |  | c. | ​glycogen | |  | d. | sucrose​ | |  | e. | ​galactose |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.02 - Using an example, explain how the structure of a polysaccharide gives rise to its function. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 54. Glycogen is a polysaccharide used for energy storage by \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | plants​ | |  | b. | ​animals | |  | c. | ​protists | |  | d. | ​bacteria | |  | e. | ​archaea |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.03 - Name the function that glycogen serves in the human body. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 55. Which type of bonding allows the long, straight chains of cellulose to lock together tightly?​   |  |  |  | | --- | --- | --- | |  | a. | hydrogen​ | |  | b. | ​polar covalent | |  | c. | ​ionic | |  | d. | ​nonpolar covalent | |  | e. | ​metallic |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.02 - Using an example, explain how the structure of a polysaccharide gives rise to its function. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 56. Cellulose is \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | the most complex of the organic compounds​ | |  | b. | ​a polymer of glucose and fructose | |  | c. | ​a polymer of glucose and galactose | |  | d. | ​a component of plasma membranes | |  | e. | ​a material found in plant cell walls |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.02 - Using an example, explain how the structure of a polysaccharide gives rise to its function. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 57. \_\_\_\_ is a monosaccharide.​   |  |  |  | | --- | --- | --- | |  | a. | Cellulose​ | |  | b. | ​Fructose | |  | c. | ​Glycogen | |  | d. | ​Starch | |  | e. | ​Sucrose |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.01 - Describe the structure of carbohydrates and explain their roles in cells. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 58. Humans do not contain the enzymes to break down \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | cellulose​ | |  | b. | ​fructose | |  | c. | ​glycogen | |  | d. | ​starch | |  | e. | ​sucrose |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.02 - Using an example, explain how the structure of a polysaccharide gives rise to its function. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 59. A triglyceride molecule is made up of \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | one glycerol and two fatty acids​ | |  | b. | ​two fatty acids and two glycerols | |  | c. | ​one fatty acid and three glycerols | |  | d. | ​one glycerol and three fatty acids | |  | e. | ​one glycerol and two fatty acids |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.01 - Describe a fat, and identify the difference between saturated and unsaturated fats. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 60. In a cell membrane, the phospholipid heads are \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | hydrophobic​ | |  | b. | ​nonpolar | |  | c. | ​dissolved in the cell’s watery interior | |  | d. | ​sandwiched between the phospholipid tails | |  | e. | ​formed by fatty acids |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.03 - Describe the lipid bilayer. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 61. Unsaturated fats \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | are solid at room temperature​ | |  | b. | ​have at least one double bond in their fatty acid tail | |  | c. | ​are saturated with hydrogen atoms | |  | d. | ​mainly come from animals | |  | e. | ​consist of straight chain fatty acids |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.01 - Describe a fat, and identify the difference between saturated and unsaturated fats. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 62. All steroids have \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | the same number of double bonds​ | |  | b. | ​double bonds in the same positions | |  | c. | ​four carbon rings | |  | d. | ​the same functional groups | |  | e. | ​the same number and positions of double bonds**​** |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.04 - Give one example of a molecule that is made from cholesterol. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 63. Which food product would likely contain the largest amount of unsaturated fat?   |  |  |  | | --- | --- | --- | |  | a. | butter | |  | b. | lard | |  | c. | cream | |  | d. | olives | |  | e. | cheese |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Analyze | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.01 - Describe a fat, and identify the difference between saturated and unsaturated fats. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 64. Fats that contain \_\_\_\_ double bonds are liquids at room temperature, whereas fats that contain \_\_\_\_ double bonds are solids at room temperature.​   |  |  |  | | --- | --- | --- | |  | a. | ​*trans*; *cis* | |  | b. | ​*cis*; *trans* | |  | c. | ​hydrogenated; partially hydrogenated | |  | d. | ​partially hydrogenated; hydrogenated | |  | e. | ​unsaturated; saturated |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Understand | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.01 - Describe a fat, and identify the difference between saturated and unsaturated fats. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 65.  ​  ​  In the given figure, which fatty acid(s) is/are most likely to be solid at room temperature?   |  |  |  | | --- | --- | --- | |  | a. | I | |  | b. | II, III, and IV | |  | c. | II, III, IV, and V | |  | d. | I and IV | |  | e. | I and V |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.01 - Describe a fat, and identify the difference between saturated and unsaturated fats. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 66. A(n) \_\_\_\_ is a protein monomer.​   |  |  |  | | --- | --- | --- | |  | a. | nucleotide​ | |  | b. | ​monosaccharide | |  | c. | ​simple sugar | |  | d. | ​amino acid | |  | e. | ​ribose |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.01 - Draw the generalized structure of an amino acid. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 67. Primary protein structure is dependent upon \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | hydrophobic interactions​ | |  | b. | ​hydrogen bonds between two amino acids | |  | c. | ​covalent linkages between carbons and nitrogens of adjacent amino acids | |  | d. | ​covalent linkages between carbons and oxygens of adjacent amino acids | |  | e. | ​covalent linkages between the polypeptide and sugars or lipids |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.02 - Describe and give general examples of the four levels of protein structure. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 68. Which type of bond exists between two amino acids in a protein?​   |  |  |  | | --- | --- | --- | |  | a. | peptide​ | |  | b. | ​ionic | |  | c. | ​hydrogen | |  | d. | ​amino | |  | e. | ​sulfhydryl |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.02 - Describe and give general examples of the four levels of protein structure. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 69. Two amino acids are bonded together to form a dipeptide by which type of reaction?   |  |  |  | | --- | --- | --- | |  | a. | condensation | |  | b. | oxidation reduction | |  | c. | hydrolysis | |  | d. | decomposition | |  | e. | acid–base |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.02 - Describe and give general examples of the four levels of protein structure. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 70. Protein misfolding causes \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | Creutzfeldt–Jakob disease | |  | b. | arthritis | |  | c. | immunodepression | |  | d. | schizophrenia | |  | e. | tuberculosis |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.03 - Using an appropriate example, explain why changes in protein structure can be dangerous. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 71. ​When a protein denatures, which type of bonding is affected?   |  |  |  | | --- | --- | --- | |  | a. | covalent​ | |  | b. | ​peptide | |  | c. | ​ionic | |  | d. | ​hydrogen | |  | e. | ​metallic |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.03 - Using an appropriate example, explain why changes in protein structure can be dangerous. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 72. A protein that is linked to a carbohydrate is known as a \_\_\_\_.​   |  |  |  | | --- | --- | --- | |  | a. | glycoprotein​ | |  | b. | ​lipoprotein | |  | c. | ​fibrous proteins | |  | d. | ​denatured proteins | |  | e. | ​prions |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.02 - Describe and give general examples of the four levels of protein structure. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 73. ​Nucleotides are monomers of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ​complex lipids | |  | b. | proteins​ | |  | c. | ​polysaccharides | |  | d. | ​nucleic acids | |  | e. | ​cellulose |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.10 Nucleic Acids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.10.01 - Use an example to describe the structure of a nucleic acid. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 74. A nucleotide consists of \_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | a five-carbon sugar, a nitrogenous acid, and a phosphate group | |  | b. | a six-carbon sugar, a nitrogenous base, and a phosphate group | |  | c. | a five-carbon sugar, a nitrogenous base, and a phosphate group | |  | d. | a six-carbon sugar, a nitrogenous acid, and a phosphate group | |  | e. | a four-carbon sugar, a nitrogenous acid, and a phosphate group |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.10 Nucleic Acids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.10.01 - Use an example to describe the structure of a nucleic acid. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 75. In a polymer of nucleotides, how does one nucleotide attach to another?​   |  |  |  | | --- | --- | --- | |  | a. | The base of one nucleotide is attached to the base of the next.​ | |  | b. | ​The base of one nucleotide it attached to the sugar of the next. | |  | c. | ​The sugar of one nucleotide is attached to the sugar of the next. | |  | d. | ​The phosphate group of one nucleotide is attached to the base of the next. | |  | e. | ​The phosphate group of one nucleotide is attached to the sugar of the next. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.10 Nucleic Acids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.10.01 - Use an example to describe the structure of a nucleic acid. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 76. Which type of bonds hold the two chains of DNA together in a DNA molecule?​   |  |  |  | | --- | --- | --- | |  | a. | hydrogen​ | |  | b. | ​polar covalent | |  | c. | ​nonpolar covalent | |  | d. | ionic​ | |  | e. | ​peptide |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.10 Nucleic Acids | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.10.01 - Use an example to describe the structure of a nucleic acid. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| **Matching** |

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| ​***Match the following terms to the correct description.***   |  |  | | --- | --- | | a. | ​mass number | | b. | ​atomic number | | c. | ​radioisotope | | d. | ​isotopes | | e. | ​ions |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.2 Atoms | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.02.02 - Explain the difference between an atom and an element. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 77. ​forms of an element that differ in the number of neutrons their atoms carry   |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | |

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| 78. ​number of protons in the atomic nucleus   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 79. ​isotope with an unstable nucleus   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 80. ​total number of protons and neutrons in the nucleus of an atom   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| 81. ​atoms with more or less electrons than protons   |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | |

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| ***Match the following terms to the correct description*.**   |  |  | | --- | --- | | a. | acid | | b. | base | | c. | neutral | | d. | buffer | | e. | pH |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.5 Acids and Bases | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.05.02 - Differentiate between acids and bases. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 82. solution that contains the same concentration of H+ ions as OH– ions   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 83. measure of the relative concentration of hydrogen ions in a solution   |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | |

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| 84. substance that releases hydrogen ions in solution   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| 85. substance that accepts hydrogen ions in solution   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 86. substance that can maintain the pH of a solution at a relatively constant level   |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | |

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| ***The following are types of chemical bonds. Match these to the correct description. (The bonds may fit more than one description.)***   |  |  | | --- | --- | | a. | hydrogen | | b. | ionic | | c. | covalent |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.3 Chemical Bonds | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.03.01 - Describe a chemical bond. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 87. ​the bond between the atoms in an NaCl molecule   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 88. ​the bond between the hydrogen atoms of molecular hydrogen   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 89. ​the bond that breaks when salts dissolve in water   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 90. ​the bond in which electrons are shared   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 91. ​the bond that holds organic molecules together   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| ***The following are types of chemical bonds. Match these to the correct description.***   |  |  | | --- | --- | | a. | hydrogen | | b. | cohesion | | c. | evaporation |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Remember | | *REFERENCES:* | 2.4 Special Properties of Water | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.04.01 - Using appropriate examples, explain how the polarity of the water molecule gives rise to properties of water that are essential to life. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 92. the bond that gives water special properties   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| 93. the property that allows certain insects to walk on water   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| ***Match the structures with the appropriate label in the given figure.***   |  |  | | --- | --- | | a. | A | | b. | B | | c. | C | | d. | D | | e. | E | | f. | F | | g. | G |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.8 Lipids | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.08.01 - Describe a fat, and identify the difference between saturated and unsaturated fats. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 94. ​fatty acid   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 95. ​phospholipid   |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | |

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| 96. ​steroid   |  |  | | --- | --- | | *ANSWER:* | g | | *POINTS:* | 1 | |

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| ***Match the structures with the appropriate label in the given figure.***  ​   |  |  |  |  | | --- | --- | --- | --- | | a. | A | b. | B | | c. | C | d. | D | | e. | E | f. | F | | g. | G |  |  |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.9 Proteins | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.09.02 - Describe and give general examples of the four levels of protein structure. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 97. ​amino acid   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| ***Match the structures with the appropriate label in the given figure.***  ​   |  |  |  |  | | --- | --- | --- | --- | | a. | A | b. | B | | c. | C | d. | D | | e. | E | f. | F | | g. | G |  |  |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.7 Carbohydrates | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.07.02 - Using an example, explain how the structure of a polysaccharide gives rise to its function. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 98. ​cellulose   |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | |

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| 99. ​starch   |  |  | | --- | --- | | *ANSWER:* | f | | *POINTS:* | 1 | |

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| ***Match the structures with the appropriate label in the given figure.***  ​   |  |  |  |  | | --- | --- | --- | --- | | a. | A | b. | B | | c. | C | d. | D | | e. | E | f. | F | | g. | G |  |  |  |  |  | | --- | --- | | *DIFFICULTY:* | Bloom’s: Apply | | *REFERENCES:* | 2.10 Nucleic Acids | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *LEARNING OBJECTIVES:* | BTAT.STAR.21.02.10.01 - Use an example to describe the structure of a nucleic acid. | | *DATE CREATED:* | 11/18/2019 2:48 PM | | *DATE MODIFIED:* | 12/4/2019 6:11 AM | |

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| 100. ​nucleotide   |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | |