

CHEM 210 Module 1 - 8 Exam Newest

CHEM 210 Module 1

1. True or False: According to the Module, a compound with a molecular mass of 1,000 g/mol is considered a macromolecule. **ANS** False

2. True or False: Biomolecules can have only two functional groups. **ANS**

False

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3. True or False: In a eukaryotic cell, the organelles called ribosomes serve the purpose of digesting macromolecules. **ANS** False

4. True or False: Carbon dioxide has a linear molecular shape AND has a bond angle of 109.5 degrees **ANS** False

5. _____ is a functional group found in carbohydrates. **ANS** alcohol

6. A _____ is a chemical formula that shows how the atoms of a molecule are bonded to one another. **ANS** kekules structure

7. A collection of two or more macromolecules uniting is called a _____. |

ANS -

supramolecular complex

8. An organic compound with this structure, $C=C$, contains a _____ functional group. **ANS** alkene

9. Scientists refer to _____ as the "super glue" of the chemistry. **ANS**

carbon

10. What molecule is most important for energy storage in cells? **ANS** ATP

11. For butane, there are _____ carbon and _____ hydrogen atoms. **ANS**

4,10

12. For an organic compound, which structure is the most efficient to draw?-

ANS line bond

13. When writing an organic functional group, scientists often write an "R" as part of the structure. What does the R indicate? **ANS** rest of the molecule

14. According to the module, the study of NON-carbon compounds is referred to as _____. **ANS** inorganic

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15. Which number would be closest to the approximate number of ribosomes in an E. coli cell? **ANS** 26,000

16. Which of the following would most likely have a cell wall? **ANS** fungal cells

17. Eukaryotes have molecules that provide a protective structure. This network, which is found in all eukaryotes, is called the _____. **ANS**

cytoskele-ton

18. The molecule linked to the medical condition of gout is_____.

ANS uricacid

19. About how many different elements are found in living organisms? **ANS**

30

20. Explain the common similarity in all prokaryotic and eukaryotic cells.

Explain the similarity in at least two sentences. **ANS** The fundamental similarity is that each cell type has a plasma membrane that separates life from non-life. The plasma membrane acts as a barrier to most molecules but does have proteins that permit select molecules to cross via proteins (transporters). The plasma membrane permits the cell to have a different composition of molecules inside the cell than out and defines a space for life to occur.