### 1.9 Significance of Carbon Practice

1. A chemical bond holds atoms together. ( True/False )
2. Fatty acids are the monomers for proteins. ( True/False )
3. A compound found only in living things is called an inorganic compound. ( True/False )
4. Proteins help in making muscles in our body. ( True/False )
5. The smallest particle of a compound is called an element. ( True/False )
6. Organic compounds are defined as containing carbon (having C-C and or C-H bonds) and are found in/made by living things ( True/False )
7. Fats, oils and waxes belong in the category “nucleic acids” ( True/False )
8. Water is organic ( True/False )
9. Lipids make up genes ( True/False )
10. What is the organic compound that passes information from parent to offspring and contains instruction for the synthesis of protein?
    1. Carbohydrates
    2. Lipids
    3. DNA
    4. All of the above
11. One gram of carbohydrate yields \_\_\_\_\_ of energy.
    1. 4 calories
    2. 9 calories
    3. Both A and B
    4. None of the above
12. Category responsible for storing energy, forming the majority of what cell membranes are made of, provides living things with insulation and also carries messages.
    1. Proteins
    2. Lipids
    3. Carbohydrates
    4. Nucleic acids
13. Carbon has important qualities that make it important. They include all the following EXCEPT
    1. Form 4 covalent bonds
    2. Is the most common element on the planet
    3. Bonds with other Carbons
    4. Can form double or triple bonds
14. The type of bonds (or attractive forces between atoms/molecules) used in biology most frequently is
    1. Covalent bond
    2. Hydrogen bond
    3. Both A and B
    4. Ionic Bond
15. Which one of the following is a function of carbohydrates?
    1. Carrying messages
    2. Passing genes from parents to offspring
    3. Being a major structural component of animals
    4. None of the above

16. Explain why carbon is essential to all known life on Earth.

17. Which 2 categories of organic compounds function in providing energy to living things?

18. Which organic compound stores genetic information?

19. List the top 4 elements that living things are made of.

20. Write the chemical formula for water. How many atoms are in one molecule of water?