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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

MACROMOLECULES

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1  S |  |  | 2  S |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | T |  | 3  C | A | R | B | O | H | Y | D | R | A | T | E |  |
|  |  |  |  |  |  |  |  |  | 4  P |  |  |  |  |  | A |  |  | T |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | R |  |  |  |  |  | R |  |  | U |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 5  P | O | L | Y | S | A | C | C | H | A | R | I | D | E |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | T |  |  |  |  |  | H |  |  | A |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 6  P | O | L | Y | M | E | R |  |  |  |  |  |  |  | T |  | 7  G |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | I |  | 8  M |  |  |  | 9  F |  |  | E |  | L |  | 10  A |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 11  U | N | S | A | T | U | R | A | T | E | D |  | Y |  | C |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 12  R |  |  |  | C |  |  |  | T |  |  |  |  | C |  | T |  |  |  |  |  | 13  P |  |
|  |  |  |  |  | 14  M | O | N | O | M | E | R |  |  |  | T |  |  | 15  N |  | E |  | I |  |  |  |  |  | H |  |
|  |  |  |  |  |  |  | A |  |  |  | O |  | 16  S |  | Y |  |  | U |  | R |  | V |  |  |  |  |  | O |  |
|  |  |  |  |  |  |  |  |  |  |  | M |  | U |  | A |  |  | C |  | O |  | E |  |  |  |  |  | S |  |
|  |  |  |  |  |  |  |  |  |  |  | O |  | B |  | 17  C | E | L | L | U | L | O | S | E |  |  |  |  | P |  |
|  |  |  |  |  |  |  | 18  H |  |  |  | L |  | S |  | I |  |  | E |  |  |  | I |  |  | 19  D |  |  | H |  |
|  |  |  |  |  |  |  | B |  |  | 20  P | E | P | T | I | D | E | B | O | N | D |  | 21  T | R | A | N | S | F | A | T |
|  |  |  |  |  |  |  | O |  |  |  | C |  | R |  | S |  |  | T |  |  |  | E |  |  | A |  |  | T |  |
| 22  G | L | Y | C | O | G | E | N |  |  |  | U |  | A |  |  |  | 23  L | I | P | I | D |  |  |  |  |  |  | E |  |
|  |  |  |  |  |  |  | D |  |  |  | L |  | T |  |  |  |  | D |  |  |  | 24  N |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 25  R | I | B | O | S | E |  | 26  E | N | Z | Y | M | E |  |  |  | U |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | N |  |  |  |  |  |  |  |  |  |  | S |  |  |  | C |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | G |  |  |  |  |  |  |  | 27  A |  |  |  |  |  |  | L |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 28  O | R | G | A | N | I | C | M | O | L | E | C | U | L | E |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | I |  |  |  |  |  |  | I |  |  |  |  |  |  |  |
|  |  |  |  | 29  A | C | T | I | V | A | T | I | O | N | E | N | E | R | G | Y |  |  | C |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | O |  |  |  |  |  |  | A |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 30  M | O | N | O | S | A | C | C | H | A | R | I | D | E |  |  | C |  |  |  |  |  |  |  |
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| **Across**  **3.** biological molecule consisting of carbon, hydrogen and oxygen atoms, usually with a hydrogen–oxygen atom ratio of 2:1  **5.**  polymeric carbohydrate molecules composed of long chains of monosaccharide units bound together by glycosidic linkages and on hydrolysis give the constituent monosaccharides or oligosaccharides.  **6.** a substance that has a molecular structure consisting chiefly or entirely of a large number of similar units bonded toget many synthetic organic materials  **11.**  having carbon–carbon double or triple bonds and therefore not containing the greatest possible number of hydrogen atoms for the number of carbons.  **14.**  a molecule that may bind chemically or supramolecularly to other molecules to form a polymer  **17.** an insoluble substance that is the main constituent of plant cell walls and of vegetable fibers such as cotton.  **20.** covalent chemical bond formed between two amino acid molecules.  **21.**  uncommon in nature but became commonly produced industrially from vegetable fats for use in margarine, snack food, packaged baked goods and frying fast food  **22.** a multibranched polysaccharide of glucose that serves as a form of energy storage in animals and fungi.  **23.** a group of naturally occurring molecules that include fats, waxes, sterols, fat-soluble vitamins, monoglycerides, diglycerides, triglycerides, phospholipids, and others  **25.** carbohydrate with the formula C5H10O5;  **26.**  macromolecular biological catalysts  **28.** An organic compound is any member of a large class of gaseous, liquid, or solid chemical compounds whose molecules contain carbon.  **29.** minimum energy which must be available to a chemical system with potential reactants to result in a chemical reaction.  **30.**  called simple sugars | **Down**  **1.** amylum is a polymeric carbohydrate consisting of a large number of glucose units joined by glycosidic bonds  **2.** holding as much water or moisture as can be absorbed; thoroughly soaked.  **4.** large biomolecules, or macromolecules, consisting of one or more long chains of amino acid residues.  **7.** simple polyol compound. It is a colorless, odorless, viscous liquid that is sweet-tasting and non-toxic.  **8.**  large molecule, such as protein, commonly created by polymerization of smaller subunits  **9.** is a carboxylic acid with a long aliphatic chain, which is either saturated or unsaturated  **10.**  the region of an enzyme where substrate molecules bind and undergo a chemical reaction.  **12.** Ribonucleic acid is a polymeric molecule implicated in various biological roles in coding, decoding, regulation, and expression of genes  **13.**  inorganic chemical and a salt of phosphoric acid.  **15.** organic molecules that serve as the monomers  **16.**  surface on which a plant or animal lives  **18.** A hydrogen bond is the electrostatic attraction between polar groups that occurs when a hydrogen (H) atom bound to a highly electronegative atom such as nitrogen (N), oxygen (O) or fluorine (F) experiences attraction to some other nearby highly electronegative atom.  **19.** Deoxyribonucleic acid is a molecule that carries the genetic instructions used in the growth, development, functioning and reproduction of all known living organisms and many viruses  **24.**  biopolymers, or large biomolecules, essential for all known forms of life.  **27.** biologically important organic compounds containing amine and carboxylic acid functional groups, |