Name: _____ Block: _____ Date: _____

Biology 12 - Biologically Important Molecules – Review Worksheet KEY

- **Part A: Mix and Match**: Match the term on the right with the definition on the left. Each term can be used only once. Write the letter of the best answer in the box to the left of the definition. (1/4 mark each -- total of 10 marks for this section)

P	1)	water-"loving"	A)	adenosine triphosphate
Q	2)	water-"fearing"	B)	amino acid
FF	3)	two or more polypeptide chains coming together and bonding with each other	C)	atom
I	4)	to permanently change the 3 dimensional structure of a protein	D)	buffer
Y	5)	the subunit that makes up nucleic acids - 4 types in DNA are A C G T	E)	carbohydrate
C	6)	the smallest unit of matter that cannot normally be broken into smaller particles	F)	cellulose
J	7)	the process of breaking down large fat droplets into smaller fat droplets	G)	cholesterol
II	8)	the loose association of amino acids in a polypeptide chain with each other, usually through H-bonds. e.g. alpha helix, beta pleated sheet	H)	dehydration synthesis
DD	9)	the linear sequence of amino acids in a protein, which ultimately determines its shape	I)	denature
B	10)	the building block of protein -- there are 20 different kinds normally found in nature	J)	emulsification
AA	11)	the bond that forms between two amino acids joined by dehydration synthesis	K)	enzymes
KK	12)	the 3-D shape of a polypeptide chain due to it folding back on itself and forming bonds.	L)	glucose
S	13)	molecules with identical empirical formulas but different structural arrangements of atoms	M)	glycogen
T	14)	elements with identical atomic numbers, but different number of neutrons	N)	hydrogen bond
H	15)	creating a bond between two atoms by taking OH from one atom and H from the other	O)	hydrolysis
O	16)	breaking a bond between two atoms by adding OH to one atom and H to the other	P)	hydrophobic
K	17)	biological catalysts, composed of protein, that speed up chemical reactions	Q)	hydrophilic
A	18)	ATP - the molecule that carries energy in the cell	R)	ion
E	19)	any molecule with the molecular formula $C_n(H_2O)_n$	S)	isomers
BB	20)	an important component of cell membranes, has a hydrophilic head, hydrophobic tail	T)	isotopes
V	21)	an enzyme that breaks down maltose to two glucose molecules	U)	lipid
R	22)	an atom or molecule that has either lost or gained electrons	V)	maltase
N	23)	a weak bond due to the attraction between partial charges on hydrogen, oxygen, and nitrogen atoms	W)	maltose
F	24)	a polymer of glucose, used as a structural component of plant cell walls	X)	neutral fat
M	25)	a polymer of glucose, used as a storage form for glucose in animals	Y)	nucleotide
JJ	26)	a polymer of glucose, used as a storage form for glucose in plants	Z)	oxidation
Z	27)	a loss of Hydrogen atoms (or electrons)	AA)	peptide bond
G	28)	a lipid that is an important component of cell membranes and from which steroid hormones are made	BB)	phospholipid
X	29)	a lipid composed of glycerol joined to 3 fatty acids	CC)	polymer
EE	30)	a large organic molecule formed from a chain or chains of amino acids	DD)	primary structure
CC	31)	a large molecule made by joining together smaller identical (or similar) molecules	EE)	protein
GG	32)	a gain of Hydrogen atoms (or electrons)	FF)	quarternary structure
HH	33)	a fatty acid whose carbons are all joined to the maximum number of hydrogens	GG)	reduction
LL	34)	a fatty acid that has a "kink" in it due to a double bond between carbon atoms	HH)	saturated fatty acid
W	35)	a disaccharide consisting of two glucose molecules	II)	secondary structure
U	36)	a class of molecules that includes neutral fats and steroids	JJ)	starch
D	37)	a chemical that resists changes in pH	KK)	tertiary structure
L	38)	a 6 carbon sugar that forms a 6-membered ring -- used as energy source by cells	LL)	unsaturated fatty acid