

QUIZ #1

For the multiple choice questions, there is *one* and *only one* best answer. Use the back of the sheet if you need.

1. Which of these are true as being described as limits on the size of cells?
 - a. The ability of the cell to maintain adequate concentrations of reactants and enzymes so that biochemical reactions can occur
 - b. Nutrients and waste substance being able to diffuse so that the cell is not stressed by toxic conditions
 - c. As the surface area of a cell decreases it is better able to have much larger volumes
 - d. Both (a) and (b)
 - e. All of the above
2. The H atoms of H₂O molecules chemically interact with O atoms of other H₂O molecules by
 - a. covalent bonding
 - b. hydrophobic interactions
 - c. hydrogen bonding
 - d. substrate binding
 - e. van der Waals forces
3. The amino acid has four submolecular parts (moieties). Which two of the four are involved in forming the peptide bond, that will be necessary in forming the polypeptide chain?
 - a. the side chain (R group) and the carboxylic acid (–COOH) group
 - b. the alpha carbon (α-C) atom and the carboxylic acid (–COOH) group
 - c. the fructose and the galactose monosaccharide
 - d. the carboxylic acid (–COOH) group and the amino (–NH₂) group
 - e. the integral part and the peripheral part
4. Answer EITHER (a) OR (b) to get this correct
 - (a) Briefly describe any THREE of the FOUR levels of protein structure
 - (b) Draw a reaction energy diagram for an endothermic reaction: label the axes, show the position of reactants, products, and name and label the two energy differences to show this type of reaction