

I.D. #: G: _____ **Name:** _____

- 36.** (20 pts) Briefly explain how Louis Pasteur's experiments disproved the prevailing theories of the origin of life during his time, when the scientific community did not accept previous results from experiments by other scientists. Also mention how Pasteur's conclusions are consistent with the current Cell Theory.
- 37.** (20 pts) Describe three differences between simple diffusion and primary active transport across a biological membrane. Also, what are two properties of a transported substance that strongly affect its rate of simple diffusion across a cellular membrane?
- 38.** (20 pts) Explain how two different biochemical polymers, composed of the exact same monomer (such as glucose), might have very different chemical properties and biological functions (such as: easily broken down for energy, vs. strong and stable for cell structural support). Give an example, if possible.

