

## AP Exam Free Response Question: Comparison of prokaryotic and eukaryotic cells.

*1. Prokaryotic and eukaryotic cells are physiologically different in many ways, but both represent functional collections of living matter.*

- (a) It has been theorized that the organelles of eukaryotic cells evolved from prokaryotes living symbiotically within a larger cell. Compare and contrast the structure of the prokaryotic cell with eukaryotic cell organelles, and make an argument for or against this theory.
- (b) Trace the path of a protein in a eukaryotic cell from its formation to its excretion from the cell.