

## Ch6 Questions

1. List the following in order from largest to smallest: atom, lipids, most bacteria, most plant and animal cells, nucleus, protein, virus
2. What is an organelle?
3. Using the example on p.99, calculate the surface area, volume, and then surface area to volume ratio for a 3cm cube and a 6cm cube. Why is having a large surface area to volume ratio important for the cell?
4. What are the parts of a prokaryotic cell? List an example of a prokaryotic cell.
5. List the function of each of the following: Create a chart or list them
  - a. Nucleus
  - b. Chromosomes
  - c. Nucleolus
  - d. Ribosomes
  - e. Endoplasmic reticulum (smooth and rough)
  - f. Golgi apparatus
  - g. Lysosome
  - h. Central vacuole
  - i. Mitochondria
  - j. Chloroplasts
  - k. Peroxisomes
  - l. Cytoskeleton
  - m. Centrioles
  - n. Cell wall
6. List the organelles that make up the endomembrane system.
7. What is the extracellular matrix and what is its purpose?
8. Define the 4 types of intracellular junctions.

## Ch7 Cell Transport

1. What is the fluid mosaic model?
2. Describe the structure of the plasma membrane.
3. What is amphipathic mean? How does it relate to phospholipids?
4. Explain the functions of the 6 different types of membrane proteins.
5. What is a concentration gradient?
6. What is the difference between passive and active transport?
7. What is osmosis and explain the 3 environments that cause osmosis: isotonic, hypertonic, and hypotonic?
8. What is diffusion and facilitated diffusion?
9. Explain how a sodium (Na) and potassium (K) pump works.
10. What is the difference between endocytosis and exocytosis?
11. Read p.130

## Ch44 Urinary System

1. What is osmoregulation?
2. What are the forms of nitrogen waste in animals?
3. Explain the 4 parts of the excretory processes. (p.961)
4. List the major organs of the urinary system and their functions.
5. Explain the structure of a nephron and the pathway of filtrate.
6. Summarize the 5 steps of blood filtrate to urine. (p.965-966)
7. How are hormones used to regulate the kidneys?