

Chapter 6 & 7 Study Guide
EXAM WED/THURS

Chapter 6

Label the parts of the atom. Use these choices:

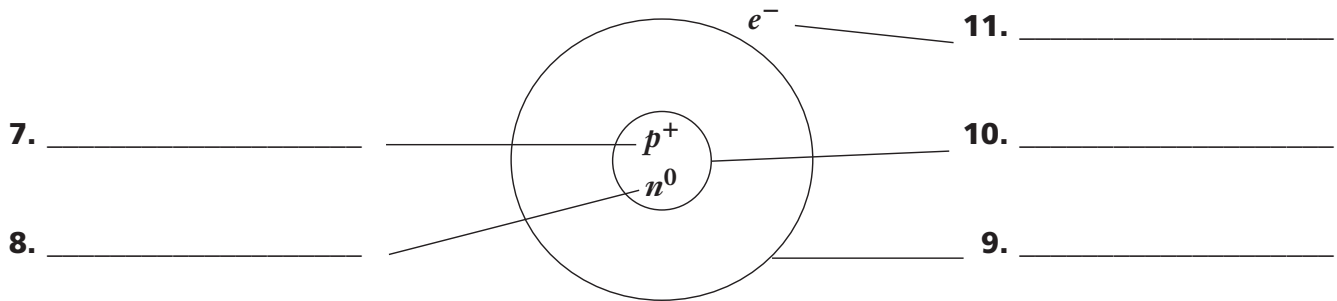
energy level

electron

neutron

proton

nucleus



Answer the following questions.

12. What is the maximum number of electrons in each of the following energy levels: first, second, third?

8. The net movement of particles from an area of higher concentration to an area of lower concentration is called
- dynamic equilibrium.
 - nonrandom movement.
 - concentration gradient.
 - diffusion.
9. Diffusion occurs because of
- nonrandom movement of particles.
 - random movement of particles.
 - a chemical reaction between particles.
 - chemical energy.
10. When a few drops of colored corn syrup are added to a beaker of pure corn syrup, the color will
- move from low concentration to high concentration.
 - form a polar bond.
 - start to diffuse.
 - remain on the bottom of the beaker.
11. Diffusion can be accelerated by
- decreasing the pressure.
 - increasing the temperature.
 - decreasing the movement of particles.
 - increasing the dynamic equilibrium.
12. When materials pass into and out of a cell at equal rates, there is no net change in concentration inside the cell. The cell is in a state of
- dynamic equilibrium.
 - metabolism.
 - imbalance.
 - inertia.
13. The difference in concentration of a substance across space is called
- dynamic equilibrium.
 - concentration gradient.
 - diffusion.
 - Brownian movement.

Complete the table by checking the correct column for each description.

Description	Lipids	Proteins	Nucleic Acids
13. Made up of nucleotides			
14. Most consist of three fatty acids bonded to a glycerol molecule			
15. DNA and RNA			
16. Contain peptide bonds			
17. Produce proteins			
18. Commonly called fats and oils			
19. Made up of amino acids			
20. Used for long-term energy storage, insulation, and protective coatings			

Chapter 7

Complete the table by checking the correct column for each statement.

Statement	Prokaryotes	Eukaryotes
7. Organisms that have cells lacking internal membrane-bound structures		
8. Do not have a nucleus		
9. Are either single-celled or made up of many cells		
10. Generally are single-celled organisms		
11. Organisms that have cells containing organelles		

Use each of the terms below just once to complete the passage.

glucose plasma membrane homeostasis
 organism balance selective permeability

Living cells maintain a **(1)** _____ by controlling materials that enter and leave. Without this ability, the cell cannot maintain **(2)** _____ and will die. The cell must regulate internal concentrations of water, **(3)** _____, and other nutrients and must eliminate waste products. Homeostasis in a cell is maintained by the **(4)** _____, which allows only certain particles to pass through and keeps other particles out. This property of a membrane is known as **(5)** _____. It allows different cells to carry on different activities within the same **(6)** _____.

Complete the table by writing the name of the cell part beside its structure/function. A cell part may be used more than once.

Structure/Function	Cell Part
1. A membrane-bound, fluid-filled sac	
2. Closely stacked, flattened membrane sacs	
3. The sites of protein synthesis	
4. A folded membrane that forms a network of interconnected compartments in the cytoplasm	
5. The clear fluid inside the cell	
6. Organelle that manages cell functions in eukaryotic cell	
7. Contains chlorophyll, a green pigment that traps energy from sunlight and gives plants their green color	
8. Digest excess or worn-out cell parts, food particles, and invading viruses or bacteria	
9. Small bumps located on the endoplasmic reticulum	
10. Provides temporary storage of food, enzymes, and waste products	
11. Firm, protective structure that gives the cell its shape in plants, fungi, most bacteria, and some protists	
12. Produce a usable form of energy for the cell	
13. Modifies proteins chemically, then repackages them	
14. Contains inner membranes arranged in stacks of membranous sacs called grana	
15. Plant organelles that store starches or lipids or that contain pigments	