

Final Exam Study Guide- Unit 4: Cells

1. What type of cell has a nucleus and membrane bound organelles? Eukaryotic
What type of cell does not have a nucleus or membrane bound organelles? Prokaryotic
2. What are the 4 parts that ALL cells share?
 - a. Cytoplasm
 - b. Cell Membrane
 - c. DNA
 - d. ribosomes
3. What are two examples of prokaryotes? Bacteria and Archeans
What are two types of eukaryotes? Plants and Animals
1. Where does all the metabolic activity in a cell occur? cytoplasm
2. Ribosomes help to make proteins for the cell.
3. DNA is located in the nucleus in an eukaryotic cell.
4. Circle or highlight the correct word for each bolded pair: The section of the Endoplasmic Reticulum with attached ribosomes and is responsible for protein synthesis is called the **rough** / smooth ER. The section of the Endoplasmic Reticulum without ribosomes and is responsible for packages and breaks down lipids is called the rough / **smooth** ER.
5. When a protein leaves the rough ER in a vesicle, the protein travels to the Golgi body (apparatus) to be processed and packaged for intercellular or extracellular transport.
6. What are the 3 organelles that are found in plant cells, but not animals?
 - a. Chloroplast
 - b. Cell Wall
 - c. Central Vacuole
7. Circle or highlight the correct word for each bolded pair: The cell membrane is made up of a phospholipid bilayer with **hydrophilic** / hydrophobic heads and hydrophilic / **hydrophobic** tails. This structure allows it to perform its function, maintaining balance in the cell.
8. The fluid mosaic model of cell membranes incorporates the different parts of the membrane. What part of the membrane is responsible for the functions listed below?
 - a. Transport, receive messages, connect cells together: proteins
 - b. Identify cells: carbs, which can be connected to either a lipid called: glycolipid or a protein called: glycoprotein
9. What are the 3 types of passive transport?
 - a. Diffusion - used to move small material like oxygen and carbon dioxide
 - b. Osmosis - used to move water
 - c. Facilitated Diffusion - used to move large material like glucose
10. Circle or highlight the correct word for each bolded pair: Passive transport moves material from low / **high** concentration to **low** / high concentration and does not require an input of energy.
11. Facilitated diffusion uses a protein to help move large molecules across the membrane.

12. Circle or highlight the correct word for each bolded pair: Active transport moves material from **low** / **high** concentration to **low** / **high** concentration and needs an input of energy.
13. A type of active transport that uses vesicles to bring large material into a cell is called endocytosis.
A type of active transport that uses vesicle to expel large material out of the cell is called exocytosis.
14. Neurons use the sodium - potassium pump, a form of active transport that uses a protein to move ions across the cell membrane to send signals throughout the body.