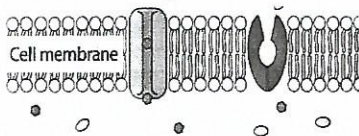


B.A.T. Review Questions

1. What type of solution causes a cell to expand? Hypotonic
2. What type of solution causes a cell to shrink? Hypertonic
3. What types of solution causes a cell to be in a homeostatic state (meaning no change)? Isotonic
4. (Circle one) In a **HYPOTONIC** solution the solute is MORE / LESS / EQUAL concentrated in the cell. H₂O moves in
5. (Circle one) In a **HYPERTONIC** solution the solute is MORE / LESS / EQUAL concentrated in the cell. H₂O moves out
6. What happens to the cell if it places in a **hypotonic** solution? swells
7. What happens to the cell if it places in a **hypertonic** solution? shrinks / crenates
8. The cell structure that allows substances in and out of the cell. cell membrane
9. What two biomolecules makes up majority of the cellular membrane? lipids + proteins
10. What does Semi-Permeable mean? some things go through, some don't
11. How does a cell's membrane help the cell to survive? maintains homeostasis by regulating what enters & leaves
12. Describe the structure and alignment of the phospholipids in the cell membrane. Heads are hydrophilic and point toward water in and out of cell. Tails are hydrophobic and point inward away from water
13. What three structures are involved in protein synthesis and delivery? ribosomes, ER, Golgi
14. What are proteins made of? chains of amino acids
15. What two cell structures eliminate waste? lysosome + cell membrane
16. The **two types of cellular transport** are passive and Active.
17. Active transport requires energy and Passive Transport does not require energy to move molecules through the cell's membrane.
18. The **three types of passive transport** are Simple diffusion, facilitated diffusion and osmosis.
19. Osmosis is only to describe diffusion for water.
20. **Facilitated Diffusion** needs the help of proteins to help push molecules through the cellular membrane.
21. **Active Transport** requires what type of energy? ATP
22. **Passive transport** are when molecules moving from High to Low concentration.
23. **Active transport** are when molecules moving from Low to High concentration.
24. Name the structure that is embedded into the cellular membrane in the diagram. protein



25. (Circle one) Passive Transport goes WITH / AGAINST the concentration gradient while active transport **WITH** / **AGAINST** the concentration gradient.

26. What kind of organisms are prokaryotic cells? Bacteria
27. What kind of organisms are eukaryotic cells? All others
28. What are 3 structures found in plant cells but not in animal cells? cell wall, Large vacuole, chloroplast
29. What macromolecule is found in cell walls of plants? carbohydrates (cellulose)
30. Eukaryotic cells have a nucleus while Prokaryotic do not have a nucleus.
31. What type of cells have membrane-bound organelles? Eukaryotic
32. Explain what similarities all Eukaryotic cells have in common?
membrane bound organelles, nucleus, Linear DNA, more complex
33. Viruses are considered nonliving and only share the characteristic of having Nucleic acid inside them with cells.
34. What type of energy is produced by a mitochondria? ATP (mechanical)
35. What types of energy is produced by a chloroplast? Glucose (chemical)
36. Animals have MITOCHONDRIA / CHOLORPLAST / BOTH organelles to give them energy.
37. Plants have MITOCHONDRIA / CHOLORPLAST / BOTH organelles to give them energy.
38. Proteins are made by ribosomes shipped by ER and packaged by Golgi.
39. Do both cell types have ribosomes? yes Why? All cells need ribosomes to make proteins
40. Are paramecium single or multi-celled? single unicellular
41. What type of cell do paramecium classify as? Eukaryote. Do they have a nucleus? yes
42. Would paramecium be effected if you placed them in a hypotonic or hypertonic solution? yes
43. What type of cell do Euglena classify as? eukaryote
44. Would Euglena be effected if you placed them in a hypotonic or hypertonic solution? yes
45. Do they have a nucleus? yes
46. What does the Endosymbiont Theory explain? How eukaryotes evolved from prokaryotes
47. What 3 things do mitochondria and chloroplasts have in common with prokaryotes?
ribosomes, circular DNA, binary fission for reproduction