**Unit #3 Review Sheet**

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| 1. What material did Hooke look at under a microscope? What did he name them?  Looked at:  Named them: | 2. What are the 3 parts to the cell theory?  1. All living…  2. Cells are the…  3. All cells come… | | | | | | | | | 3. Living things are “organized”. List the level of organization from most simple to complex.  ***Cells*🡪(A.)🡪*Organs*🡪(B.)🡪(C.)**    **A.)**  **B.)**  **C.)** | | | | |
| 4. Label the microscope diagram using the word bank.  microscope_labelling_full_size_landscape  **Word Bank**   1. Light Source b.) Eyepiece c.) Base   d.) Stage e.) Nosepiece f.) Diaphragm  g.) Stage Clips h.) Coarse Adjustment Knob  i.) Objective Lenses j.) Fine Adjustment Knob | | | | | | | | 5. Match the function with the word bank.    \_\_\_\_\_\_\_\_ Controls the amount of light.  \_\_\_\_\_\_\_\_ Focuses while using low power.  \_\_\_\_\_\_\_\_ Focuses while using medium &  high power.  \_\_\_\_\_\_\_\_ Raises and lowers the stage.  -----------------------------------------------------------  6. Answer the magnification questions below.  \_\_\_\_\_\_\_\_ Magnification under low power.  \_\_\_\_\_\_\_\_ Magnification under medium power.  \_\_\_\_\_\_\_\_ Magnification under high power.  \_\_\_\_\_\_\_\_ Total magnification while using a  medium power objective. | | | | | | |
| 7. Name each of the three cells pictured below:  A. B. C.  bacterial-cell-structure PROKARYOTE.jpeg Blank Animal Cell.JPG Plant Cell.JPG | | | | | | | | | | | | | | |
| 8. How is a ***prokaryote*** different than a ***eukaryote***? | | | | | | 9. Which of the pictures in question 7 is a prokaryote?  Which of the pictures in question 7 are eukaryotes? | | | | | | 10. List 3 ways that plants cells are different than animal cells.  1.  2.  3. | | |
| 11. Label the Cells Using the Word Bank  **Word Bank**  1. Cell Membrane  2. Smooth ER  3. Nucleolus  4. Rough ER  5. Lysosome  6. Chromatin  7. Mitochondria  8. Ribosomes  9. Vacuole  10. Cytoplasm  11. Centrioles  12. Cell Wall  13. Golgi Bodies  14. Chloroplasts  15. Nucleus  **Function**  \_\_\_\_\_ Powers the cell.  \_\_\_\_\_ Package & ship protein  \_\_\_\_\_ Water & nutrient storage.  \_\_\_\_\_ Produces ribosomes  \_\_\_\_\_ Fluid of the cell  \_\_\_\_\_ Makes protein  \_\_\_\_\_ Transports protein & has  ribosomes attached  \_\_\_\_\_ Digestive enzymes that break  down cell waste.  \_\_\_\_\_ Thin threads of chromosomes.  \_\_\_\_\_ Controls what enters & leaves  a cell.  \_\_\_\_\_ Regulates cell activities  \_\_\_\_\_ Transports protein & has no  ribosomes attach  \_\_\_\_\_ Site of photosynthesis  \_\_\_\_\_ Helps cell divide  \_\_\_\_\_ Rigid structure that offers  support & protection    Cell Diagram Resized Labeled.JPG | | | | | | | | | | | | | | |
| Plant Cell Edited for Review Sheet.JPG | | | | | | | | | | 12. True or False:  \_\_\_\_\_\_\_\_The Cell Membrane and the Plasma Membrane are the same structure. | | | | |
| 13. What term means that the cell is picky about what enters and leaves? | | | | | 14. How many layers thick is the Plasma membrane? | | | | 15. What are the 2 components that make up the Cell Membrane?  1.  2. | | | | | |
| 16. Define the terms ***hydrophilic***and ***hydrophobic.***  ***Hydrophilic:***  ***Hydrophobic:*** | | | | | 17. Define the terms ***polar*** and ***nonpolar***.  ***Polar:***  ***Nonpolar:*** | | | | | | | | | |
| 18. What term means that the cell is in “balance”? Explain how this term relates to the Cell Membrane. | | | | | 19. Define ***dynamic equilibrium***. | | | | | | | | | |
| 20.  Plasma Membrane.JPG | | | | | Label the Plasma Membrane using the following terms:  ***Protein, Phospholipid, Polar, Nonpolar, Hydrophilic, Hydrophobic*** | | | | | | | | | |
| 21. How is **Passive Transport** different than **Active Transport?** | | | | 22. Give 3 examples of Passive Transport:  1.  2.  3. | | | | | | | | | 23. Define ***osmosis***. | |
| 24. Define ***concentration gradient***: | | | | 25. Explain how water moves in regards to the cell in each of the following solutions. Label each cell picture as ***hypertonic, hypotonic, & isotonic.***  ***Hypotonic Solution.JPGIsotonic Solution.JPG Hypertonic Solution.JPG*** | | | | | | | | | | |
| 26. How does water move in each of these solutions? Label each as ***hypotonic, Isotonic, or hypertonic***.Beakers.JPG | | | | | | | | | | | | | | |
| 27. Draw ATP | | | 28. Draw ADP | | | | | | | | 29. Where is energy stored in an ATP molecule? | | | |
| 30. Write the equation for cellular respiration using words | | | | | | | Write the equation for cellular respiration using molecules. | | | | | | | |
| 31. Write the equation for photosynthesis using words. | | | | | | | Write the equation for photosynthesis using molecules | | | | | | | |
| 32. List the reactants of cellular respiration. | | 33. List the products of cellular respiration. | | | | | 34. List the reactants of photosynthesis. | | | | | | | 35. List the products of photosynthesis. |
| 36. In what organelle does cellular respiration occur in? | | | | | | | 37. In what organelle does photosynthesis occur in? | | | | | | | |
| 38. What is the Cell Cycle? | | | | | | | 39. What are the 2 phases that make up the cell cycle? | | | | | | | |
| 40. What are the 3 divisions of interphase and describe what the cell is doing in each of the 3 phases: | | | | | | | 41. What are the 4 divisions of Mitosis listed in the order in which they occur? | | | | | | | |
| 42. Label the following stages of the cell cycle and put them in the correct order:  Anaphase good.JPGInterphase good.JPGMetaphase good.JPGProphase good.JPGTelophase good.JPG | | | | | | | | | | | | | | |
| 43. What are stem cells? | | | | | | | 44. How are embryonic stem cells different than adult stem cells? | | | | | | | |
| 45. Give examples of specialized cells in the body: | | | | | | | | | | | | | | |