

Name _____ Date _____ Period _____

Chapter 3 Concept Review

B I O L O G Y

Directions: Answer the following questions using your notes and textbook (pages 96-125)

1. Robert _____ (1665)-Used compound microscope to look at cork cells. Gave name "cells"
2. Anton van _____ (1674)- made powerful single lens microscope. One of first to look at and describe living cells
3. Rudolf Virchow (1855)- Proposed that all _____ come from pre-existing _____.
4. Accumulated research summarized as _____ Theory (one of first unifying concepts in biology)
 - a. All organisms are made of _____
 - b. All existing _____ are produced by other _____ cells
 - c. The cell is the most basic _____ of _____
5. All cells are filled with _____.
6. _____ cells- do not have a nucleus or other membrane-bound organelles.
7. _____ cells- have a nucleus and other membrane bound organelles. May be single or multicellular organisms
8. _____ - storehouse for genetic material
9. _____ and _____ are produced in ER.
10. Rough ER- studded with _____ - makes proteins and lipids
11. Golgi Apparatus- cells " _____ "
12. _____ - cells "powerhouse"
13. _____ - fluid-filled storage sac. Stores water, food molecules, inorganic ions, and enzymes.
14. Cell _____ - found in plants, algae, fungi, and most bacteria. Strong _____ layer that surrounds cell membrane
15. Chloroplasts- carries out _____.

16. Contain _____ (disc-shaped sacs) with light-absorbing chlorophyll for photosynthesis. (give plants _____ color)
17. Cell membrane Controls passage of materials into and out of cell. Is selectively _____ (allows some things but not others) Helps to maintain the cells homeostasis
18. Cell membrane Consists of _____ layer of phospholipids interspersed with other molecules (proteins and carbohydrates)
19. Fluid Mosaic Model- describes arrangement of molecules in _____ membrane. Flexible "fluid like" lipid embedded with "mosaic" of other _____..
20. Molecules cross membrane in several ways. Some methods of transport require _____ and some do not.
21. _____ transport- allows cell to move materials across cell membrane without using energy
22. _____ - Movement of materials (fluid or gas) from region of _____ concentration to region of _____ concentration
23. Osmosis- Diffusion of _____ molecules.
24. Facilitated diffusion- larger molecules can still diffuse through openings formed by transport _____.
25. Many types of transport proteins- most allow only certain _____ to travel into cell
26. _____ Transport- requires energy by cell to move materials in or out of cell.
27. Can use transport proteins to move molecules against _____ gradient (from low to high).
28. Endocytosis- Movement of liquids or large molecules _____ a cell by engulfing them in a membrane.
29. Phagocytosis- "cell _____"
30. _____ - opposite of endocytosis.