Name_____

**Cell Theory and Microscopes**

**Questions 1-3,** List the three parts of cell theory.

1. _____

2. _____

3._____

**Questions 4 -5,** Provide 3 distinct characteristics for each prokaryotic cells and eukaryotic cells. Use the word blank below.

| | | | | |
|---|---|---|---|---|
| Has Nucleus | Has DNA | Lacks Nucleus | Bacteria | non-membraned DNA |
| Includes Animals, plants, fungi, and protists. | | membraned DNA | | Has Organelles |

**4. Prokaryotic cells**

A._____

B._____

C._____

D. _____

**5. Eukaryotic Cells**

A._____

B._____

C._____

D. _____

E. _____

6.Name two characteristics both Eukaryotic Cells and Prokaryotic cells have in common. Use the word bank from above.

A._____

B._____

**Questions 7- 9**, Calculate the Magnification of each Objective lens below.

7. Eye Piece _____x **X** Low Power _____x = _____x

8. Eye Piece x **X** Medium Power x = x

9. Eye Piece _____x **X** High Power _____x = _____x

**Questions 10-11,** Answer the following questions about the Microscope and its usage.

10. On which power(s) is the course adjustment knob used?_____

11. On which power(s) is the fine adjustment knob used?

_____

Name_____

**Structures inside the cell.**

**Questions 12-22,** Fill in the blank with the organelle that best fits the description. Use the following terms: Lysosome, Cytoplasm, Vacuole, Ribosomes, Golgi Apparatus, Chloroplast, Mitochondria, Cell Wall, Cell Membrane, Nucleus, Endoplasmic Reticulum

12. The _____ is the **outermost** living layer of the cell and it controls movement into and out of the cell.

13.The _____ is the **control center** of the cell and it regulates the cells activities. Contains the DNA of the Cell.

14. The _____ is a j**elly-like substance** that contains the organelles and allows them to move throughout the cell.

15. The _____ is the site of **cellular respiration** . It is often called the **powerhouse** of the cell.

16.The _____ captures energy from **sunlight** and uses it to produce food in **plants.**

17.The _____ **packages** materials for transport outside of the cell.

18.The _____ is the organelle responsible for **transporting** materials within the cell.

19.The _____ **supports** and protects **plant** cells.

20. A small sac in the cytoplasm which **breaks down** food, old cell parts, and dead, injured, or obsolete cells is the _____.

21.A large sac in the cytoplasm which **stores** food, water, or wastes is a _____.

22. Small grain shaped organelles that produce **protein** are called_____.

23 Name the macromolecule thats produced in the rough endoplasmic reticulum_____.

24 Name the macromolecule thats produced in the smooth endoplasmic reticulum_____.

Name_____

**Questions 25-36,** Identify the organelles depicted in the cells below. Use the following terms: Animal,Ribosomes, Cytoplasm, Plant, Vacuole, Golgi Complex, Chloroplast, Mitochondria, Cell Wall, Cell Membrane, Nucleus, Endoplasmic Reticulum, Lysosome

A. _____

B. _____

C. nuclear membrane

D. _____

E. _____

F. _____

G. _____

H. _____

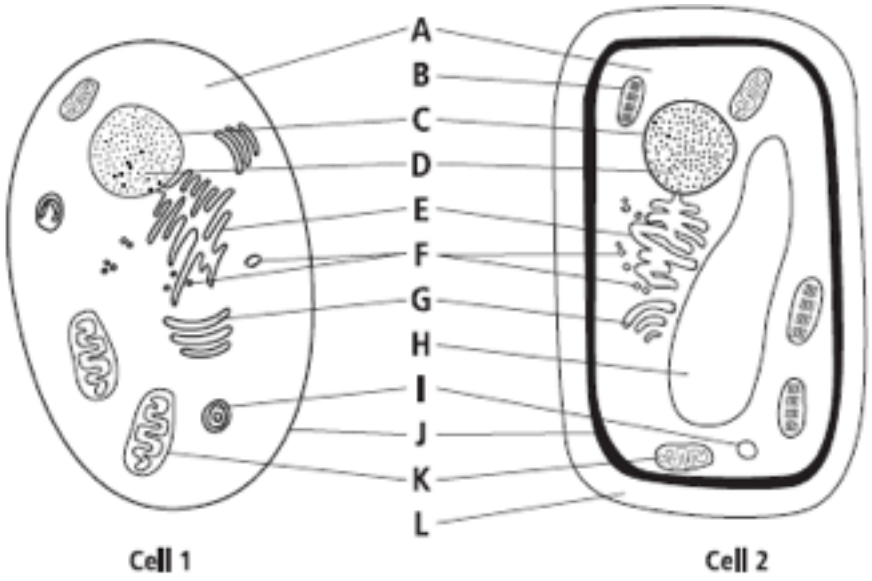
I. _____

J. _____

K. _____

L. _____

37. Cell 1 is a :_____ cell  38. Cell 2 is a :_____ cell



Name_____

Directions: List the four types of macromolecules, provide a function and a food source.

| Macromolecule | Function | Food Source |
| --- | --- | --- |
| | | |
| | | |
| | | |
| | | |