

Quiz 4: Cell Organelles (BIO.3c)

- Use the diagram below and the functions to identify each organelle or cellular structure (1 pt each).
- Complete the sentences at the bottom of the page by circling the correct word in parentheses and filling in both blanks.
- Use the following word bank for all blanks. Every word will only be used once.

Word Bank

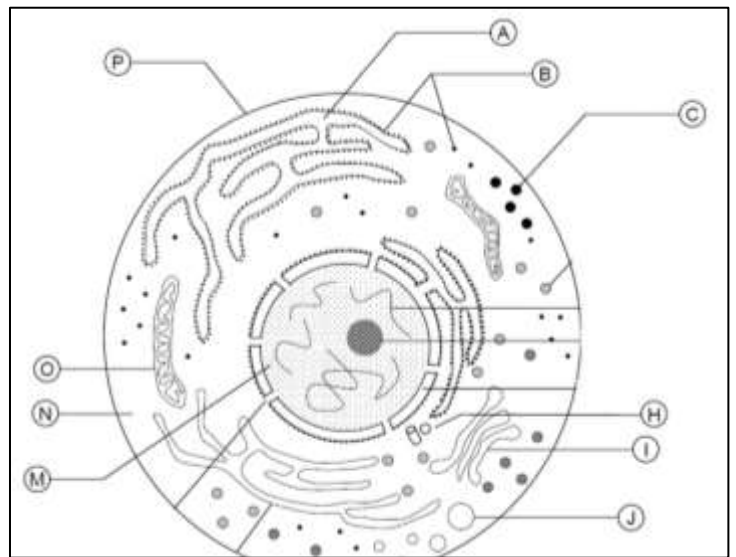
Cell membrane	Cell wall	Centriole	Chloroplast
Cilia	Cytoplasm	Endoplasmic reticulum	Flagella
Golgi	Lysosome	Mitochondrion	Nucleus
Ribosome	Vacuole		

1. This cell is not a plant cell because **it does not have**

- a rigid _____ for protection and support, or
- a _____ for turning light energy into food (photosynthesis).

2. This cell cannot move because **it does not have**

- small, hair-like projections called _____ or _____
- long, whip-like structures called _____.



3. This cell **does have**

- A. _____ - makes and transports chemicals within the cell.
- B. _____ - makes proteins.
- C. _____ - holds digestive enzymes
- H. _____ - controls chromosome movement during cell division
- I. _____ - packages chemicals for cell export
- J. _____ - stores food, water, and waste.
- M. _____ - holds DNA, so it controls the cell.
- N. _____ - is the jelly-like substance that holds organelles in place.
- O. _____ - turns food into useable energy for the cell.
- P. _____ - controls what enters and exits the cell.

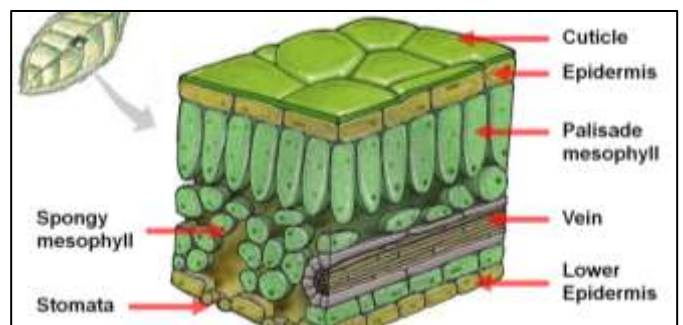
Name _____ Block _____ Date _____

- Complete each of the following descriptions of specialized cells using the word bank below.
- Not all words will be used, but no word will be used more than once.
- Hint: The **function or job** of each cell type is underlined. Match this with an organelle's function.

Word Bank

Cell membrane	Cell wall	Centrioles	Chloroplasts
Cytoplasm	Endoplasmic reticulum	Golgi	Lysosomes
Mitochondria	Nucleus	Ribosomes	Vacuoles

1. Muscle require a lot of energy, so muscle cells contain large numbers of _____
2. White blood cells need lots of digestive enzymes to break down germs, so they contain extra _____
3. Liver cells manufacture large amounts of protein. Therefore, they require large numbers of _____
4. Neurons communicate with other cells, so they package large amounts of signaling chemicals for export. This job requires a large _____
5. Red blood cells need extra space to carry oxygen. They do not divide, so they do not carry genetic material (DNA). Therefore, red blood cells do not have a _____
6. Cells in the stem of a *plant* must provide extra support and rigidity, so these cells have a stronger, thicker _____
7. In a *plant* leaf, the function of cells in the palisade layer (see picture) is to convert light energy into food (photosynthesis), so they are full of _____



Short Answer

1. Explain the difference between unicellular and multicellular organisms. (2 pts)
2. Look at the cell on the front of this quiz. Identify this cell as prokaryotic or eukaryotic, and describe one reason why. (2 pts)