

1. Which of the following organelles may be absent from eukaryotic cells?
(a) nucleus
(b) mitochondria
(c) plasma membrane
(d) chloroplast
2. A feature distinguishing plant cells from animal cells is the presence of:
(a) a plasma membrane
(b) a cell wall
(c) cytosol
(d) mitochondria
3. Compounds present in the cell wall of bacteria include:
(a) cellulose
(b) chitin
(c) complex polysaccharides
(d) glucose
4. The following compound is present in a plasma membrane:
(a) protein
(b) starch
(c) cellulose
(d) chitin
5. A process that requires energy is:
(a) osmosis
(b) diffusion
(c) facilitated diffusion
(d) active transport
6. The net movement of a substance from a region of high concentration of the substance to a region of low concentration is called:
(a) osmosis
(b) diffusion
(c) facilitated diffusion
(d) active transport
7. A cell that is phagocytosing a bacterial cell could be expected to:
(a) have a cell wall
(b) be expending energy
(c) be producing oxygen
(d) contain a chloroplast
8. Animal cells typically contain:
(a) plastids
(b) large vacuoles
(c) cell walls
(d) enzymes
9. Plant cells are viewed through a light microscope. Structures made visible could include:
(a) mitochondria
(b) plastids
(c) centrioles
(d) ribosomes

10. In eukaryotic cells, significant stages of cellular respiration occur in the:
(a) chloroplasts
(b) ribosomes
(c) mitochondria
(d) endoplasmic reticulum.
 11. In multicellular organisms, groupings of similar cells are referred to as:
(a) tissues
(b) organs
(c) systems
(d) organisms.
 12. Match the entries in column X with the most appropriate entry in column Y.
- | Column X | Column Y |
|--------------------------|---|
| A membrane-bound nucleus | 1 channels for internal transport |
| B cell wall | 2 site for packaging material for export |
| C cell membrane | 3 major site of ATP formation |
| D endoplasmic reticulum | 4 non-living outer layer of some cells |
| E mitochondrion | 5 site of trapping of radiant energy |
| F chloroplast | 6 living boundary of all cells |
| G ribosome | 7 site of internal digestion |
| H Golgi body | 8 absent in prokaryotic cells |
| I lysosome | 9 site of assembly of amino acids into proteins |
13. State whether each of the following statements is true or false.
(a) All living cells possess a cell wall.
(b) If an animal cell is placed in distilled water, its membrane will rupture.
(c) Random movement of small particles in the cytoplasm of a cell is called Brownian movement.
(d) A piece of muscle tissue will swell when placed in a strong salt solution.
(e) Cellulose forms part of the structure of plant cells.
(f) Osmosis is the diffusion of solute molecules across a cell membrane.
(g) ATP supplies in living cells are continually being used up and must be replaced.
(h) Prokaryote cells produce ATP in their mitochondria.