

- 1) All cells must possess all of the following EXCEPT
  - A. cytoplasm.
  - B. genetic material.
  - C. nuclear membrane.
  - D. plasma cell membrane.
  - E. ribosomes.
- 2) Which of the following structures are not common to all eukaryotic cells?
  - A. Cell Wall
  - B. Plasma Membrane
  - C. Nucleus
  - D. Cytoplasm
  - E. Ribosomes
- 3) What is a difference between "free" and "attached" ribosomes?
  - A. Free ribosomes are in the cytoplasm while attached ribosomes are anchored to the endoplasmic reticulum.
  - B. Free ribosomes are in the cytoplasm while attached ribosomes are in mitochondria and chloroplasts.
  - C. Free ribosomes produce proteins in the nucleus while attached ribosomes produce proteins in the cytoplasm.
  - D. Free ribosomes produce proteins in the cytoplasm while attached ribosomes make proteins for mitochondria and chloroplasts.
- 4) The phospholipids and cholesterol that are used to form membranes are synthesized in the
  - A. cytoplasm.
  - B. rough endoplasmic reticulum.
  - C. smooth endoplasmic reticulum.
  - D. Golgi.
  - E. plasma membrane.
- 5) What organelle sorts and packages newly synthesized proteins to be delivered to different parts of the cell?
  - A. Golgi
  - B. Ribosomes
  - C. Nucleus
  - D. Mitochondria
  - E. Chloroplasts
- 6) Which of the following organelles are found in animal cells but not plant cells?
  - A. Mitochondria
  - B. Chloroplasts
  - C. Ribosomes
  - D. Central Vacuole
  - E. None of the Above
- 7) Which of the following would you not find in a prokaryotic cell?
  - A. Cytoplasm
  - B. Ribosome
  - C. Protein
  - D. Mitochondria
  - E. DNA
- 8) Which of the following parts of the cell is larger?
  - A. Cytoplasm
  - B. Ribosome
  - C. Nucleus
  - D. Mitochondria
  - E. Chromatin
- 9) Which of the following is associated with rough ER?
  - A. chlorophyll
  - B. ribosomes
  - C. lipid synthesis
  - D. plasma membrane
  - E. DNA
- 10) Researchers have been able to study the movement of a secreted protein through the cell from synthesis to secretion by "tagging" it with a fluorescent marker. Using this method, you would observe fluorescence moving from the ER to which organelle?
  - A. nuclear membrane
  - B. lysosome
  - C. plasma membrane
  - D. mitochondria
  - E. Golgi complex
- 11) DNA in a prokaryotic cell is contained within the \_\_\_\_.
  - A. Nucleoid Region
  - B. Nucleolus
  - C. Nuclear Membrane
  - D. Nucleus
- 12) Which organelle provides most of the ATP for muscle cells?
  - A. Mitochondria
  - B. Golgi bodies
  - C. Rough endoplasmic reticulum
  - D. Lysosomes
  - E. Smooth endoplasmic reticulum
- 13) Chloroplasts may be found in which of the following types of cells?
  - A. animal
  - B. plant
  - C. bacterial
  - D. animal and plant
  - E. plant and bacterial

14. List three similarities and three differences between eukaryotic and prokaryotic cells.

15. Draw the structure of mitochondrion and clearly label the two membranes and the spaces separated by those membranes.

16. Proteins which are eventually secreted are first synthesized on the ER. Trace the movement of these proteins as they move to the surface of the cells listing all the organelles that the proteins interact.

17. List two structures found in plant cells that are not in animal cells. Briefly describe the function of each structure.