

FRONT

Unit 2: Cells Practice Test

1. All of the following are components of the modern cell theory except
 - A) All living organisms are made up of one or more cells
 - B) The smallest living organisms are single cells, and cells are the functional units of multicellular organisms
 - C) All cells arise from pre-existing cells
 - D) Bacterial cells are eukaryotic
 - E) All of these are true
2. What is not characteristic of a prokaryotic cell?
 - A) a plasma membrane
 - B) a nuclear membrane
 - C) ribosomes
 - D) enzymes
 - E) DNA
3. All cells possess all the following components EXCEPT
 - A) cytoplasm
 - B) genetic material
 - C) nuclear membrane
 - D) plasma cell membrane
 - E) ribosomes
4. The cytoplasm of eukaryotic cells contains
 - A) water.
 - B) dissolved nutrients.
 - C) organelles.
 - D) enzymes.
 - E) all of these
5. Which organelle does one expect to be most abundant in cardiac muscle cells?
 - A) mitochondria
 - B) lysosomes
 - C) Golgi complexes
 - D) smooth ER
 - E) plastids
6. A nucleolus is
 - A) an extra nucleus in the cell
 - B) a darkly staining area in the nucleus where ribosomes are made
 - C) an area where the nucleus is synthesized
 - D) a membrane-bound organelle
 - E) the area in a prokaryote where DNA is concentrated

7. If all the lysosomes within a cell suddenly ruptured, what could occur?
- A) The macromolecules in the cell cytosol would begin to degrade
 - B) The number of proteins in the cytosol would begin to increase
 - C) The DNA within the mitochondria would begin to degrade
 - D) The mitochondria and chloroplasts would begin to divide
 - E) There would be no change in the normal function of the cell
8. Ribosomes are the site of synthesis of
- A) DNA
 - B) RNA
 - C) proteins
 - D) nucleoli
 - E) glucose
9. How does a cell rid itself of defective or malfunctioning organelles?
- A) They are engulfed by plastids and stored until export from cell is possible
 - B) Defective parts accumulate until the cell itself dies
 - C) Lysosomes assist in the removal of defective organelles by digesting them
 - D) Ribosomes play a significant role in the removal of malfunctioning parts by absorbing the parts
 - E) They are exported by exocytosis
10. Which organelle extracts energy from food molecules and stores it in the high-energy bonds of ATP?
- A) mitochondrion
 - B) chloroplast
 - C) ribosome
 - D) centriole
 - E) ER
11. A biologist ground up some plant cells and then centrifuged the mixture. She obtained some organelles from the pellet in the test tube that took up CO_2 and gave off O_2 . The organelles are most likely
- A) nuclei
 - B) ribosomes
 - C) chloroplasts
 - D) mitochondria
 - E) Golgi bodies
12. Which of the following relationships between cell structures and their respective functions is NOT correct?
- A) cell wall — support and protection
 - B) chloroplasts — chief site of cellular respiration
 - C) nucleus — site of genetic control of information
 - D) ribosomes — site of protein synthesis
 - E) mitochondria — formation of ATP for the cell

Practice Test

13. A cell has the following molecules and structures: enzymes, DNA, ribosomes, plasma membrane, and mitochondria. It could be a cell from
- A) a bacterium
 - B) an animal, but not a plant
 - C) a plant, but not a animal
 - D) a plant or animal
 - E) any kind of organism
14. A cell from a wheat plant would contain which of the following?
- A) Cell wall
 - B) Chloroplast
 - C) Mitochondria
 - D) A and B
 - E) A, B and C
15. DNA is located in which of the following?
- A) prokaryotic cells
 - B) plant cells
 - C) animal cells
 - D) chloroplasts
 - E) all of the above
16. Prokaryotic as well as eukaryotic cells possess
- A) mitochondria
 - B) chloroplasts
 - C) a cytoskeleton
 - D) ribosomes
 - E) a nucleus
17. Which is a difference between prokaryotes and eukaryotes?
- A) Prokaryotes have RNA, eukaryotes have DNA
 - B) Prokaryotes have DNA, eukaryotes have RNA
 - C) Prokaryotes have a nucleoid, eukaryotes have a nucleus
 - D) Prokaryotes have a cell wall, eukaryotes do not
18. Which of the following correctly identify components that are the same in both plant cells and bacterial cells?
- A) nucleus, DNA, plasma membrane, ribosomes
 - B) cytoplasm, endoplasmic reticulum, DNA, plasma membrane, ribosomes
 - C) cytoplasm, DNA, plasma membrane, ribosomes
 - D) cytoplasm, nucleolus, DNA, plasma membrane
 - E) cytoplasm, nucleoid, DNA, plasma membrane, ribosomes

Name: _____

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19. Found in all cells and composed of phospholipid bilayer

- A) Mitochondria
- B) Vacuole
- C) Cell Membrane
- D) Lysosomes
- E) Chloroplast

20. Responsible for most of a muscle cell's ATP generation and cellular respiration

- A) Mitochondria
- B) Vacuole
- C) Cell Membrane
- D) Lysosomes
- E) Chloroplast