

## Unit 2: The Life of a Cell

### Practice Questions

- Cells come in two basic types, prokaryotic and eukaryotic. Which cell structure is found in both prokaryotic and eukaryotic cells?
  - A vacuole
  - B nucleoid
  - C mitochondrion
  - D cytoplasm
- All living things are made up of prokaryotic or eukaryotic cells. Which function is found in both prokaryotic and eukaryotic cells?
  - A aerobic respiration
  - B sexual reproduction
  - C protein production
  - D nitrogen fixation
- All cells, prokaryotic and eukaryotic, have a few common features. Which cell feature is found in both prokaryotic and eukaryotic cells?
  - A ribosome
  - B chloroplast membrane
  - C nucleus
  - D endoplasmic reticulum
- Which organelle produces ATP in the process of aerobic cellular respiration?
  - A nucleus
  - B vacuole
  - C chloroplast
  - D mitochondrion
- Which cell type has a higher degree of complexity?
  - A archaeobacteria
  - B eubacteria
  - C eukaryotic
  - D prokaryotic
- What do cells rely on to maintain a constant pH in their environment?
  - A neutralizer
  - B diffusion
  - C osmosis
  - D buffer
- Which structure is *most likely* to be present only in eukaryotic cells?
  - A ribosome
  - B cytoplasm
  - C mitochondrion
  - D plasma membrane
- What is the function of ribosomes?
  - A DNA synthesis
  - B lipid synthesis
  - C photosynthesis
  - D protein synthesis
- Which type of cell would *most likely* contain large vacuoles for holding water?
  - A animal cell
  - B fungal cell
  - C plant cell
  - D fish cell

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10. Which characteristic distinguishes a prokaryotic cell from a eukaryotic cell?

- A the loss of chloroplasts
- B the appearance of nuclei
- C the absence of mitochondria
- D the occurrence of endosymbiotic events

11. What structure does the cell rely on to help regulate proteins exiting the cell?

- A cell wall
- B vacuoles
- C chloroplast
- D plasma membrane

12. Which organelle contains chromosomes?

- A the nucleus
- B the vacuoles
- C the ribosomes
- D the mitochondria

13. Which structure is found mostly in plant cells and provides a rigid structure for the cell?

- A cell wall
- B chloroplast
- C chlorophyll
- D cytoskeleton

14. Which kind of cell has the *greatest* number of mitochondria?

- A skin cell
- B lung cell
- C brain cell
- D muscle cell

15. Which organisms are *best* described as prokaryotic cells?

- A bacteria
- B protists
- C plants
- D fungi

16. Which cellular process is *most closely* related to the presence of chloroplasts in eukaryotes?

- A metabolism
- B photosynthesis
- C aerobic respiration
- D lactic acid fermentation

17. What structure surrounds the cell and regulates materials that enter and leave the cell?

- A nucleus
- B chloroplast
- C mitochondrion
- D cell membrane

18. A cell that has lost its nucleus no longer has the ability to

- A produce food.
- B pass genetic information.
- C move through the body.
- D use energy.