

10. Plants reduce water loss by using the
a) xylem and phloem c) waxy cuticle and stomata
b) mesophyll d) ground tissue
11. In a plant, storage of food is a primary function of
a) xylem c) roots
b) phloem d) leaves
12. Which is not considered to be a plant organ
a) flower c) stem
b) seed d) leaf
13. More plants on Earth may reduce global warming because they
a) provide more shade
b) reduce carbon dioxide in the atmosphere
c) provide more food
d) affect weather patterns
14. What stage of the cell cycle is the longest for most cells?
a) mitosis c) anaphase
b) cytokinesis d) interphase
15. Which of the following is NOT a type of plant tissue
a) dermal c) vascular
b) ground d) connective
16. Which of the following words does not belong; stigma, style, filament, and ovary
a) stigma c) style
b) ovary d) filament
17. The process of digestion begins in the
a) stomach c) mouth
b) esophagus d) small intestine
18. Which tissue type covers and protects the human body?
a) epithelial c) muscle
b) nerve d) connective
19. The _____ is a flap of tissue that guards the entrance of the trachea, closing when anything is swallowed that should go into the esophagus and stomach
a) epiglottis c) larynx
b) pharynx d) trachea

20. Match the organelle with the description below

- a. chloroplasts
- b. golgi bodies
- c. nucleus
- d. cell membrane
- e. ribosomes
- f. cell wall
- g. endoplasmic reticulum
- h. mitochondria
- i. vacuole

_____ separates the inside of the cell from the external environment; controls the flow of materials into and out of the cell.

_____ contains genetic information that controls all cell activities

_____ is sometimes call the “power plant” of the cell

_____ network of membrane-covered channels that transport materials made in the cell

_____ collects, sorts and packages proteins for transport out of the cell

_____ contain water and other materials

_____ help to produce proteins

_____ tough, rigid structure lying just outside a cell’s membrane; provides support for the cell

_____ trap energy from the sun to make glucose

21. Identify the term that best matches the definition or description given

- a) stem
- b) leaf
- c) guard cell
- d) waxy cuticle
- e) vascular tissue
- f) root hair
- g) chloroplast

_____ absorbs water and nutrients from the soil

_____ consists of xylem and phloem

_____ the site of photosynthesis inside the cell

_____ holds the leaves up high into the sun light

_____ open and close the stomata

_____ layer that limits the water lost through evaporation

_____ are the main site of photosynthesis

22. What are the three ideas that form the cell theory?

23. What is the most obvious difference between prokaryotic and eukaryotic cells?

24. Explain the process of diffusion. What is osmosis?

25. What is the chemical equation for cellular respiration?

26. Clearly label 3 plant cell organelles

27. What are the three reasons for cell division to occur?

28. Which stage or phase of the cell cycle corresponds to each of the descriptions below?

(a) a new cell wall begins to form

(b) the membrane of the nucleus dissolve

- (c) daughter chromosomes begin to separate
 - (d) the cell begins to pinch together along its center
 - (e) thick chromosome threads are visible in two distinct regions of the cell
 - (f) the cell grows and copies its DNA
29. What is cell differentiation?
 30. List the four different types of animal tissues and give a brief description of each
 31. List the four different types of plant tissues and give a brief description of each
 32. What are stem cells? What is the difference between embryonic stem cells and meristematic cells?
 33. What is the balanced chemical equation for photosynthesis?
 34. Explain how water is absorbed by osmosis through a plants roots
 35. What are the xylem and phloem? What are their functions?
 36. What is the name given to the dermal tissue on the top and bottom of a plants leaf? How does this tissue reduce the amount of water that evaporates from the leafs surface?
 37. What is the name of the two organ systems found in a plant?
 38. Give an example of an organ that is found in
 - (a) only one organ system
 - (b) more than one organ system
 39. List the main parts of the digestive tract and their major functions.
 40. Why is it necessary for food to be digested?
 41. Which kind of tissue contracts to push food through the digestive system?
 42. Explain how the circulatory system interacts with the respiratory system
 43. Name the main organs and structures of the respiratory system

THINKING/INQUIRY

1. Make two diagrams to show the differences between animal cytokinesis and plant cytokinesis.
2. Describe the difference mitosis and cytokinesis. Explain any tips that help you remember the difference
3. Do all animal cells look the same? Explain
4. The cells in the stomach of an animal reside in a hostile environment in which they are frequently killed. What must these cells do for the animal to survive?
5. The upper epidermis is very different from the lower epidermis. Explain.
6. Without water plants will die. Explain how water keeps the plant alive
7. Why are complex organisms made up of specialized cells?
8. Not all plant cells contain chloroplasts. What is the most likely the reason for this?
9. What do you think would happen to other forms of life on earth if most or all of the plant life disappeared? Explain your answer in terms of what goes on inside cells.

APPLICATION

1. A cleaning product claims to kill “99.9% of all bacteria.” Will a cleaned surface stay bacteria free forever? Explain your answer
2. A minor wound heals over time, explain how this happens
3. when you exercise, you breathe harder and faster. Using your knowledge of organelles, explain why this happens.
4. Do plant cells specialize in the same way as animal cells? Use examples of each to illustrate your answer
5. In the lining of the small intestine, there are thousands of little projects called villi. What is the purpose of this adaptation and name an organ in a plant that has a similar adaptation.

ANSWERS

1. B
2. B
3. D
4. A
5. C
6. A
7. D
8. B
9. B
10. C
11. C
12. B
13. B
14. D
15. D
16. D
17. C
18. A
19. A
20. D, C, H, G, B, I, E, A
21. F, E, G, A, C, D, B