

1. Which organelles are most closely associated with the process of aerobic respiration?

- (1) ribosomes (3) nucleoli
(2) **mitochondria** (4) vacuoles

2. Centrioles are normally present in the

- (1) cytoplasm of onion cells
(2) **cytoplasm of cheek cells**
(3) nuclei of liver cells
(4) nuclei of bean cells

3. The ribosomes of plant cells are sites for the synthesis of

- (1) ATP (3) nucleic acids
(2) sugars (4) **enzymes**

4. Which organelle contains hereditary factors and controls most cell activities?

- (1) **nucleus**
(2) cell membrane
(3) vacuole
(4) endoplasmic reticulum

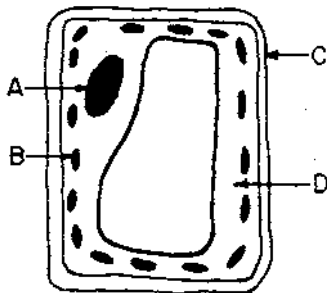
5. Centrioles are cell structures involved primarily in

- (1) **cell division** (3) enzyme production
(2) storage of fats (4) cellular respiration

6. Most cellular respiration in plants takes place in organelles known as

- (1) chloroplasts (3) ribosomes
(2) stomates (4) **mitochondria**

7. Which structures in the diagram below enable the observer to identify it as a plant cell?



- (1) A and B (3) A and C
(2) **B and C** (4) B and D

8. The ribosome is an organelle that functions in the process of

- (1) phagocytosis (3) **protein synthesis**
(2) pinocytosis (4) cellular respiration

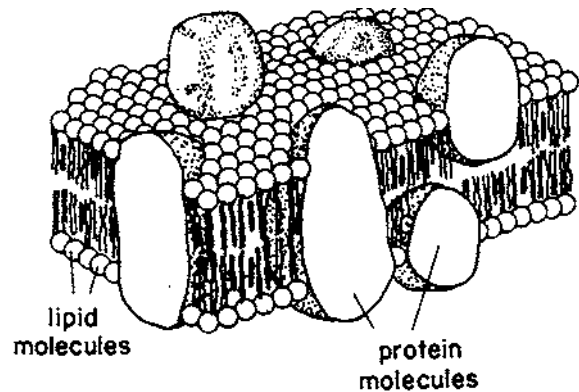
9. Which statement best describes the plasma membrane of a living plant cell?

- (1) **It selectively regulates the passage of substances into and out of the cell.**
(2) It is composed of proteins and carbohydrates only.
(3) It has the same permeability to all substances found inside or outside the cell.
(4) It is a double protein layer with floating lipid molecules.

10. Which structures are found in every living cell?

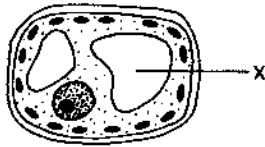
- (1) **a plasma membrane and cytoplasm**
(2) chloroplasts and mitochondria
(3) a cell wall and nucleus
(4) centrioles and chromosomes

11. Which cellular organelle is represented by diagram below?



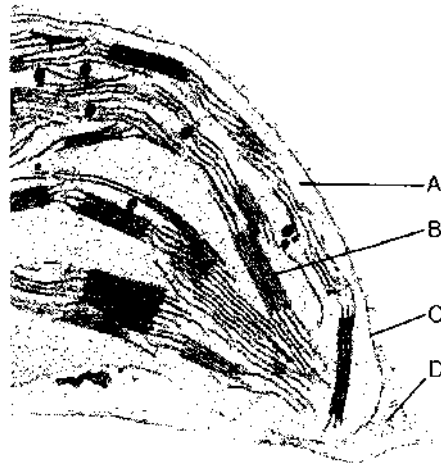
- (1) protein (3) **plasma membrane**
(2) molecules (4) cell wall

12. In the diagram of a cell below, the structure labeled X enables the cell to



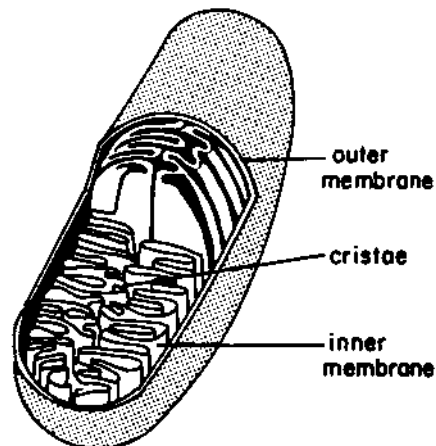
- (1) release energy
(2) store waste products
 (3) control nuclear division
 (4) manufacture proteins
13. Most of the reactions of aerobic cellular respiration occur within the organelle known as the
- (1) lysosome **(3) mitochondrion**
 (2) nucleus (4) vacuole
14. Which organelles are usually found in both plant and animal cells?
- (1) cell walls **(3) mitochondria**
 (2) centrioles (4) chloroplasts
15. Which cytoplasmic organelles contain hereditary material and can undergo replication?
- (1) chloroplasts and cell walls
 (2) cell membranes and ribosomes
 (3) endoplasmic reticula and food vacuoles
(4) mitochondria and chloroplasts
16. Which organelles' activity contributes most directly to muscle contraction in an earthworm?
- (1) Golgi bodies **(3) mitochondria**
 (2) chloroplasts (4) lysosomes
17. Which structures are used by a paramecium for maintaining water balance?
- (1) contractile vacuoles** (3) pseudopodia
 (2) food vacuoles (4) cilia

18. The micrograph below shows part of a cell containing a portion of a chloroplast.



The highest concentration of chlorophyll exists in the region indicated by letter

- (1) A (3) C
(2) B (4) D
19. Which organelles' activity contributes most directly to muscle contraction in an earthworm?
- (1) vacuoles **(3) mitochondria**
 (2) chloroplasts (4) ribosomes
20. Which metabolic process is most closely associated with the organelle represented in the diagram below?



- (1) intracellular digestion (3) synthesis of glycogen
(2) aerobic respiration (4) hydrolysis of lipids