

Plants and Society 9th edition Levetin Test Bank

SKU: 9781264094714-TEST-BANK

Plants and Society Edition 9 by Levetin

CORRECT ANSWERS ARE
LOCATED IN THE 2ND HALF OF
THIS DOC.

**MULTIPLE CHOICE - Choose the one
alternative that best completes the
statement or answers the question.**

- 1) The early microscopist Robert Hooke coined the term "*cell*" after viewing tiny compartments resembling cubicles in a monastery in the outer bark or _____ of an oak tree.
 - A) leaves
 - B) acorns
 - C) twigs
 - D) cork
 - E) roots
- 2) Which of the following is *not* a statement of Cell Theory?
 - A) All cells arise from preexisting cells.
 - B) All cells contain the hereditary material, DNA.
 - C) All organisms are made up of cells.
 - D) The cell is the basic unit of life.
 - E) All of these are correct statements about Cell Theory.
- 3) Who among the scientists listed below was *not* directly involved in the development of Cell Theory?
 - A) Hooke
 - B) Schleiden
 - C) Schwann
 - D) Virchow
 - E) Both Schwann and Virchow were involved in the development of Cell Theory.
- 4) What is the spontaneous movement of particles or molecules from an area of greater concentration to one of lesser concentration?
 - A) active transport
 - B) diffusion
 - C) concentration gradient
 - D) osmosis
 - E) facilitated diffusion
- 5) Which of the following statements about the primary cell wall of a plant is correct?
 - A) consists primarily of lignin
 - B) forms inside of the secondary cell wall
 - C) consists primarily of cellulose
 - D) forms inside the plasma membrane
 - E) is only produced in woody plants
- 6) Which of the following organelles is the site of photosynthesis in a plant cell?
 - A) Peroxisomes
 - B) Mitochondria
 - C) Endoplasmic reticulum
 - D) Chloroplasts
 - E) Ribosomes
- 7) What material imparts toughness and strength to the secondary cell walls of plant cells?
 - A) Lignin
 - B) Keratin
 - C) Chromatin
 - D) Pectin
 - E) Condensin

Plants and Society Edition 9 by Levetin

- 8) What are the cytoplasmic bridges between adjacent plants cells that allow the passage of materials?
- A) pits
 - B) middle lamellae
 - C) microtubules
 - D) plasmodesmata
 - E) cytoskeletons
- 9) In which stage of interphase is the DNA duplicated in preparation for mitosis?
- A) RNA
 - B) G_2
 - C) S
 - D) rRNA
 - E) G_1
- 10) Where is the middle lamella located in plant tissue?
- A) in the plasmodesmata
 - B) between the walls of adjacent plant cells
 - C) in the pits of cell walls
 - D) between microtubules and microfilaments
 - E) between primary and secondary cell walls
- 11) What structure made of microtubules, intermediate filaments, and microfilaments is the scaffolding of the cell?
- A) cell wall
 - B) plasmodesmata
 - C) plasma membrane
 - D) middle lamella
 - E) cytoskeleton
- 12) What makes up the double layer of the plasma membrane?
- A) carbohydrates
 - B) nucleic acids
 - C) phospholipids
 - D) cellulose
 - E) proteins
- 13) Which of the following statements is correct?
- A) The plasma membrane is differentially permeable.
 - B) The movement of water across the plasma membrane is called facilitated diffusion.
 - C) Osmosis is a form of active transport.
 - D) Plasmolyzed is the normal state of well-watered plant cells.
 - E) Integral proteins have channels for water transport.
- 14) What protein acts in joining identical chromatids together and also arranges chromosomes in a specific pattern in the nucleus?
- A) kinetin
 - B) condensin
 - C) chromatin
 - D) adhesin
 - E) cohesion
- 15) When a plant cell is placed in a *hypotonic solution*, water will _____ the cell and the cell becomes _____.
- A) leave; plasmolyzed
 - B) enter; plasmolyzed
 - C) enter; turgid
 - D) leave; turgid
 - E) enter; flaccid

Plants and Society Edition 9 by Levetin

- 16) What stage of the cell cycle does a cell spend most of its life?
- A) interphase
 - B) metaphase
 - C) prophase
 - D) telophase
 - E) anaphase
- 17) When a plant cell is placed in a *hypertonic solution*, water will _____ the cell and the cell becomes _____.
- A) leave; plasmolyzed
 - B) enter; plasmolyzed
 - C) enter; turgid
 - D) leave; turgid
 - E) enter; flaccid
- 18) When soils are dry for long periods of time during drought conditions, plant cells in roots become _____.
- A) hypertonic.
 - B) plasmolyzed.
 - C) turgid.
 - D) osmotic.
 - E) hydrated.
- 19) _____ is(are) necessary for diffusion to take place.
- A) A cell membrane
 - B) Membrane proteins
 - C) Energy
 - D) A concentration gradient
 - E) Membrane phospholipids
- 20) Which of the following pigments is most abundant in chloroplasts?
- A) carotene
 - B) xanthophyll
 - C) melanin
 - D) chlorophyll
 - E) tannins
- 21) Where would starch grains be stored in the cells of a potato?
- A) the central vacuole
 - B) amyloplasts
 - C) proteasome
 - D) elaioplast
 - E) glyoxysomes
- 22) Where are carotenoid pigments in colors of red, orange, and yellow stored in the plant cell?
- A) leucoplasts.
 - B) protoplasts
 - C) chromoplasts
 - D) amyloplasts
 - E) elaioplasts

Plants and Society Edition 9 by Levetin

- 23) Which of the following is *not* correct?
- A) During cellular respiration, glucose is chemically broken down to carbon dioxide, water, and ATP.
 - B) The inner membrane of mitochondria has numerous infoldings called *cristae*.
 - C) The matrix of mitochondria contains enzymes used in cellular respiration.
 - D) In some cells, the central vacuole takes up 90 percent of the cell volume.
 - E) Glyoxysomes disassemble defective proteins.
- 24) Which of the following is not found within the nucleus?
- A) chromatin
 - B) nucleolus
 - C) DNA
 - D) ribosomes
 - E) RNA
- 25) What are the folded membranes in the grana of a chloroplast called?
- A) leucoplasts
 - B) stroma
 - C) thylakoids
 - D) vacuoles
 - E) cristae
- 26) The oil in an avocado is stored in organelles called
- A) leucoplasts.
 - B) amyloplasts.
 - C) chloroplasts.
 - D) chromoplasts.
 - E) elaioplasts.
- 27) What group of pigments imparts the blue of blueberries and the deep red of beets?
- A) carotenoids
 - B) xanthophylls
 - C) chlorophylls
 - D) anthocyanins
 - E) carotenes
- 28) What is the protein-rich interior of the chloroplast called?
- A) the matrix
 - B) cristae
 - C) stroma
 - D) plasma membranes
 - E) ribosomes
- 29) What features in common with bacteria led scientists to conclude that chloroplasts and mitochondria evolved from bacteria?
- A) Their DNA is similar to prokaryotic DNA.
 - B) Their ribosomes are similar to those of bacteria.
 - C) Cell division in both is like bacterial cell division.
 - D) The chemical composition of their inner membranes is similar to those of bacteria.
 - E) Chloroplasts and mitochondria share all of these bacteria-like features.
- 30) What is the protein component of microtubules?
- A) keratin
 - B) tubulin
 - C) cohesin
 - D) chromatin
 - E) actin

Plants and Society Edition 9 by Levetin

- 31) What organelle of plants stores anthocyanin pigments?
- A) central vacuole
 - B) chromoplast
 - C) chloroplast
 - D) leucoplast
 - E) endoplasmic reticulum
- 32) Where are the lipids stored in seeds broken down to release nutrients to the growing seedling?
- A) peroxisomes
 - B) proteasomes
 - C) glyoxysomes
 - D) chromosomes
 - E) tannosomes
- 33) What organelle stores, modifies, and packages materials?
- A) endoplasmic reticulum
 - B) mitochondria
 - C) proteasomes
 - D) Golgi apparatus
 - E) central vacuole
- 34) Where can ribosomes be found in the cell?
- A) chloroplasts
 - B) nucleus
 - C) nucleolus
 - D) central vacuole
 - E) rough endoplasmic reticulum
- 35) Ribosomes are the sites for the synthesis of
- A) proteins.
 - B) lipids.
 - C) carbohydrates.
 - D) nucleic acids.
 - E) fats and oils.
- 36) What structure covers and protects the ends of chromosomes from damage?
- A) centromere
 - B) chromatid
 - C) chromatin
 - D) nucleotide
 - E) telomere
- 37) In which phase of mitosis do sister chromatids separate and move to the opposite poles of the cell?
- A) anaphase
 - B) metaphase
 - C) telophase
 - D) cytokinesis
 - E) nucleotide
- 38) In which stage of mitosis do doubled chromosomes line up at the equator of the cell?
- A) prophase.
 - B) telophase.
 - C) metaphase
 - D) interphase
 - E) anaphase
- 39) In which stage of the cell cycle do chromosomes duplicate?
- A) metaphase
 - B) prophase
 - C) anaphase
 - D) telophase
 - E) interphase

Plants and Society Edition 9 by Levetin

- 40) What is the process during cell division that splits the cytoplasm creating two identical daughter cells?
- A) prophase
 - B) metaphase
 - C) anaphase
 - D) telophase
 - E) cytokinesis
- 41) What does the phragmoplast give rise to?
- A) the nucleus
 - B) the wall
 - C) the plasma membrane
 - D) the middle lamella
 - E) the proteasome
- 42) The yellow of a sunflower is due to pigments contained in the
- A) central vacuole.
 - B) cell wall.
 - C) grana.
 - D) chromoplast.
 - E) cytosol.
- 43) In which stage of mitosis do daughter nuclei form?
- A) prophase
 - B) metaphase
 - C) anaphase
 - D) telophase
 - E) cytokinesis
- 44) Which of the following organelles is the site of lipid synthesis?
- A) leucoplast
 - B) nucleolus
 - C) ribosome
 - D) smooth ER
 - E) Golgi body
- 45) Where in the cell are proteins synthesized?
- A) ribosomes and the nucleolus
 - B) rough and smooth ER
 - C) nucleolus and smooth ER
 - D) Golgi body and the nucleolus
 - E) ribosomes and rough ER
- 46) According to the Cell Theory,
- A) plant cells have cell walls.
 - B) cells reproduce.
 - C) all cells need oxygen for cellular respiration.
 - D) a gene is a segment of DNA.
 - E) eukaryotic cells evolved from prokaryotic cells.
- 47) What membrane surrounds the central vacuole in plants cells?
- A) the proplastid
 - B) the tonoplast
 - C) the thylakoid
 - D) the cristae
 - E) the leucoplast
- 48) The organelle associated with cellular respiration and the production of energy within a cell is the
- A) matrix
 - B) cristae
 - C) microbody
 - D) Golgi body
 - E) mitochondrion

Plants and Society Edition 9 by Levetin

- 49) The oils in a peanut are stored in an organelle known as the
- A) ribosome.
 - B) amyloplast.
 - C) peroxisome.
 - D) elaioplast.
 - E) glyoxisome.
- 50) Nectar accumulates in the tube of a honeysuckle flower. What organelle would secrete the sugary nectar into the floral tube?
- A) Golgi body
 - B) nucleolus
 - C) mitochondrion
 - D) chloroplast
 - E) smooth ER
- 51) The control center that houses the genetic material of a eukaryotic cell is the
- A) nucleoplasm.
 - B) nucleolus
 - C) chromatin.
 - D) nucleus.
 - E) microbody.
- 52) An organelle common in plant cells but lacking in animal cells is the
- A) central vacuole.
 - B) plasma membrane.
 - C) nucleus.
 - D) mitochondrion.
 - E) cytoskeleton
- 53) The inner membrane of a mitochondrion is folded. The folds are
- A) grana.
 - B) stroma.
 - C) cristae.
 - D) matrix
 - E) thylakoids.
- 54) What are the small organelles in plant cells in which specific enzymatic reactions take place?
- A) nucleoli
 - B) microbodies
 - C) microtubules
 - D) ribosomes
 - E) microfilaments
- 55) What is the main constituent of secondary cell walls in plant cells?
- A) cellulose
 - B) pectin
 - C) phospholipids
 - D) lignin
 - E) chromatin
- 56) What organelle is abundant in seeds and converts fats to sugars?
- A) cytoskeleton
 - B) peroxisome
 - C) elaioplast
 - D) glyoxisome
 - E) smooth ER

Plants and Society Edition 9 by Levetin

- 57) What is the role of the central vacuole in plants?
- A) water reservoir
 - B) pigment storage
 - C) converts toxic waste into inert crystals
 - D) generates turgor pressure
 - E) generates water
- 58) Which cytoskeletal element is composed of actin?
- A) thin filaments
 - B) microtubules
 - C) intermediate filaments
 - D) microfilaments
 - E) thick filaments
- 59) In what phase of interphase do the final preparations for mitosis take place?
- A) Gap₂
 - B) Gap₁
 - C) prophase
 - D) S
 - E) telophase
- 60) What organelle stores plant products used in turning animal skins into leather?
- A) amyloplasts
 - B) glyoxysomes
 - C) leucoplasts
 - D) proteasomes
 - E) tannosomes
- 61) What protein causes chromatin to become tightly coiled to form chromosomes?
- A) cyclin
 - B) condensin
 - C) chromatin
 - D) adhesin
 - E) cohesion
- 62) What organelle is the location for tagged proteins to be disassembled and the amino acid recycled?
- A) peroxisome
 - B) ribosome
 - C) proteasome
 - D) tannosome
 - E) glyoxysome

TBEXAM.COM

Plants and Society Edition 9 by Levetin

Answer Key

Test name: Chapter 02

- 1) D
- 2) B
- 3) A
- 4) B
- 5) C
- 6) D
- 7) A
- 8) D
- 9) C
- 10) B
- 11) E
- 12) C
- 13) A
- 14) E
- 15) C
- 16) A
- 17) A
- 18) B
- 19) D
- 20) D
- 21) B
- 22) C
- 23) E
- 24) D
- 25) C
- 26) E
- 27) D
- 28) C
- 29) E
- 30) B
- 31) A
- 32) C
- 33) D
- 34) E
- 35) A
- 36) E
- 37) A

- 38) C
- 39) B
- 40) E
- 41) B
- 42) D
- 43) D
- 44) D
- 45) E
- 46) B
- 47) B
- 48) E
- 49) D
- 50) A
- 51) D
- 52) A
- 53) C
- 54) B
- 55) D
- 56) D
- 57) E
- 58) A
- 59) A
- 60) E
- 61) B
- 62) C

TBEXAM.COM