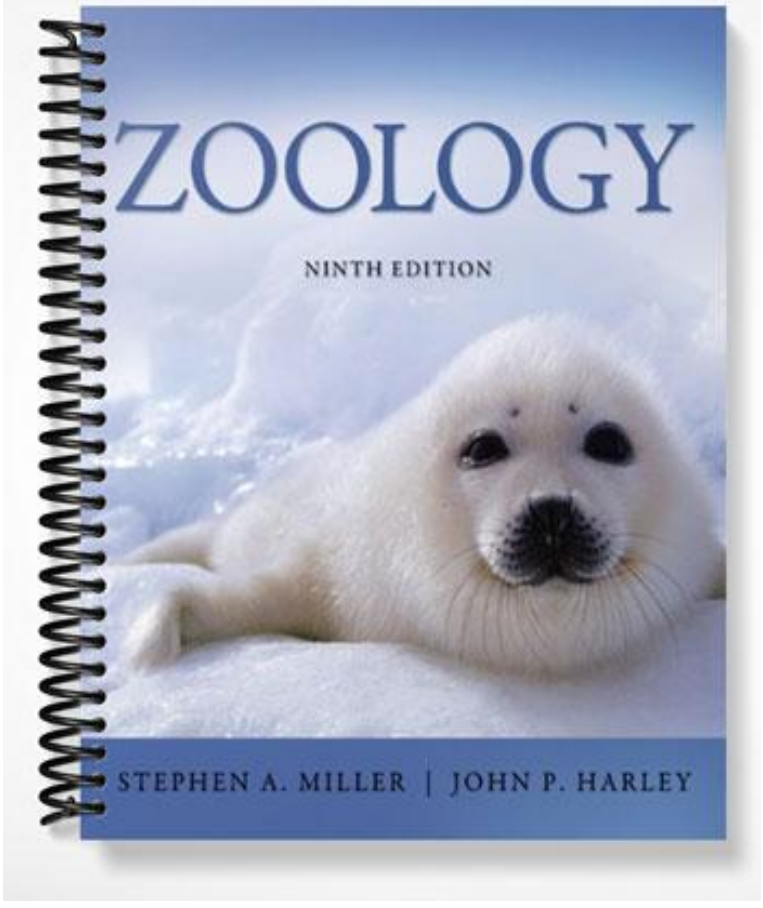
TEST BANK



Chapter 02
Cells, Tissues, Organs, and Organ Systems of Animals

Multiple Choice Questions

1. The simplest organization of matter that exhibits the properties of life is the
A. cell.
B. tissue.
C. protein.
D. nucleic acid.
E. organism.

Blooms Level: 01. Remember

2. Which of the following is part of plant cells but not animal cells?
A. mitochondria
B. endoplasmic reticulum
C. plasma membrane
D. cell wall
E. nucleus

Blooms Level: 01. Remember

3. Which of the following is found in animal cells, but is not usually found in plant cells?
A. chromosomes
B. Golgi apparatus
C. mitochondria
D. plasma membrane
E. centrioles

Blooms Level: 01. Remember

4. A cell in which the DNA is not bound by a membrane is said to be
A. prokaryotic.
B. organoid.
C. eukaryotic.
D. symbiotic.
E. endosymbiotic.

Blooms Level: 01. Remember

5. A cell with a membrane-bound nucleus, containing DNA in organized structures called chromosomes is said to be
A. symbiotic.
B. eukaryotic.
C. organoid.
D. prokaryotic.
E. endosymbiotic.

Blooms Level: 01. Remember

6. A cell that has membrane-bound units called organelles and a cytoskeleton is said to be
A. prokaryotic.
B. organoid.
C. eukaryotic.
D. symbiotic.
E. endosymbiotic.

Blooms Level: 01. Remember

7. An organelle that is used for storage and internal transport, serves as a site for attachment of ribosomes, and makes steroids, is the
A. cytoskeleton.
B. mitochondrion.
C. lysosome.
D. endoplasmic reticulum.
E. centriole.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

8. The organelle that packages and routes the synthesized products of a eukaryotic cell is the
A. flagellum.
B. ribosome.
C. peroxisome.
D. nucleolus.
E. Golgi apparatus.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

9. These structures are an example of a microbody.
A. ribosome
B. vault
C. peroxisome
D. golgi apparatus
E. rough endoplasmic reticulum

Blooms Level: 01. Remember

10. These structures have recently been shown to act as signal-receiving "antennae" for cells that help them monitor the extracellular environment.
A. vacuoles
B. mitochondria
C. smooth endoplasmic reticulum
D. cilia
E. rough endoplasmic reticulum

Blooms Level: 01. Remember
Blooms Level: 02. Understand

11. This organelle functions in cell division and organization of the cytoskeleton.
A. mitochondrion
B. centriole
C. endoplasmic reticulum
D. chloroplast
E. lysosome

Blooms Level: 01. Remember
Blooms Level: 02. Understand

12. The semifluid phase of the cytoplasm that contains organelles, vesicles, and inclusions, and serves as a medium for metabolic reactions is the
A. nucleoplasm.
B. cytoskeleton.
C. cytosol.
D. peroxisome.
E. plasma membrane.

Blooms Level: 01. Remember

13. The _____ of the mitochondria function in increasing the inner membranous surface area.
A. centrioles
B. matrix
C. strobili
D. cristae
E. thylakoids

Blooms Level: 01. Remember
Blooms Level: 02. Understand

14. The surface to volume ratio of a cell limits
A. the type of organelles present.
B. the organelle/microtubule volume.
C. the number of organelles present.
D. the plasma membrane/DNA volume.
E. the size a cell may reach.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

15. The surface area of a cell ____ as the volume of a cell _____.
A. decreases; increases
B. increases; decreases
C. decreases; remains the same
D. increases; remains the same
E. remains the same; increases

Blooms Level: 01. Remember
Blooms Level: 02. Understand

16. The fluid mosaic model of membrane structure was developed by
A. Singer and Nicolson.
B. Garth and Richardson.
C. Schleiden and Schwann.
D. Singer and Schleiden.
E. Johnson and Garth.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

17. Membrane proteins attached to the inner or outer surfaces of plasma membranes are called _____ proteins.
A. intrinsic
B. hydrophobic
C. peripheral
D. hydrophilic
E. mosaic

Blooms Level: 01. Remember
Blooms Level: 02. Understand

18. Membrane proteins that are embedded within the membrane and may function in moving materials across the membrane are called _____ proteins.
A. hydrophobic
B. extrinsic
C. mosaic
D. intrinsic
E. hydrophilic

Blooms Level: 01. Remember
Blooms Level: 02. Understand

19. The "cell coat," made of surface carbohydrates and portions of proteins, is called the
A. tunic.
B. cell wall.
C. plasma membrane.
D. desmosome.
E. glycocalyx.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

20. The ability of a membrane to regulate passage of materials into and out of a cell is called
A. selective permeability.
B. innate regulation.
C. active transport.
D. membrane uniformity.
E. homeostasis.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

21. Water molecules move through selectively permeable membranes from areas of high concentration of water to areas of lower concentration by
A. simple diffusion.
B. endocytosis.
C. osmosis.
D. facilitated diffusion.
E. hydrostatic infusion.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

22. When molecules bind temporarily with a carrier protein in a cell's membrane and move across the membrane from areas of higher concentration to areas of lower concentration is known as
A. simple diffusion.
B. endocytosis.
C. receptor-mediated osmosis.
D. active transport.
E. facilitated diffusion.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

23. The form of transport involved when blood pressure forces water and small dissolved molecules into kidney tubules is
A. osmosis.
B. simple diffusion.
C. complex diffusion.
D. filtration.
E. facilitated diffusion.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

24. Cells placed in this type of solution will shrivel.
A. isotonic
B. water
C. hypertonic
D. hypotonic
E. metatonic

Blooms Level: 01. Remember
Blooms Level: 02. Understand

25. Active transport
A. can only move molecules from higher to lower concentrations.
B. uses cellular energy to move molecules from lower to higher concentrations.
C. moves molecules through protein channels by binding them to large lipid molecules.
D. can only move protein molecules.
E. can only move carbohydrate molecules.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

26. This carrier protein transports two molecules or ions in opposite directions.
A. Uniporter
B. Symporter
C. Antiporter
D. Cotransporter
E. Proporter

Blooms Level: 01. Remember
Blooms Level: 02. Understand

27. Small hydrophilic molecules such as _____ are sometimes able to enter a cell through an aquaporin.
A. glycerol
B. cholesterol
C. glucose
D. beta carotene
E. vitamin D

Blooms Level: 01. Remember
Blooms Level: 02. Understand

28. When a plasma membrane encloses small fluid droplets and takes them into the cell, a form of transport known as _____ occurs.
A. active diffusion
B. receptor-mediated exocytosis
C. pinocytosis
D. facilitated diffusion
E. phagocytosis

Blooms Level: 01. Remember
Blooms Level: 02. Understand

29. When cells such as white blood cells of a vertebrate engulf bacteria, the membrane transport mechanism used is
A. receptor-mediated endocytosis.
B. active transport.
C. passive transport.
D. phagocytosis.
E. exocytosis.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

30. Two important and well-known active transport mechanisms in nerve cells are the _____ pumps.
A. sodium-phosphorus and calcium
B. calcium and sulfur
C. oxygen and carbon dioxide
D. protein and nucleic acid
E. calcium and sodium-potassium

Blooms Level: 01. Remember
Blooms Level: 02. Understand

31. The protein composing the filaments inside cilia and flagella is
A. tubulin.
B. actin.
C. myosin.
D. mucin.
E. collagen.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

32. Structures associated with the endoplasmic reticulum, necessary for protein synthesis are the
A. desmosomes.
B. ribosomes.
C. peroxisomes.
D. chromosomes.
E. nucleosomes.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

33. The organelle that is especially prominent and well-developed in secretory cells (such as glandular epithelial cells) is the
A. centriole.
B. phagolysosome.
C. Golgi apparatus.
D. mitochondrion.
E. peroxisome.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

34. The structures which are elongated appendages used for propelling the cell or for moving material over the cell surface are the
A. cilia and flagella.
B. axonemes and myonemes.
C. basal bodies and centrioles.
D. microtubules and microfilaments.
E. axopodia and myopodia.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

35. A major function of the cell nucleus is
A. storing proteins.
B. storing genetic information.
C. packaging materials for secretion.
D. packaging ATP for cellular use.
E. serving as a site for protein synthesis.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

36. The nuclear envelope is continuous with the _____ at a number of points.
A. plasma membrane
B. Golgi apparatus
C. endoplasmic reticulum
D. mitochondria
E. cytoskeleton

Blooms Level: 01. Remember
Blooms Level: 02. Understand

37. The _____ is an organelle inside the nucleus that serves as the pre-assembly point for ribosomes.
A. nucleosome
B. nucleotide
C. nucleoplasm
D. nucleolus
E. nucleoside

Blooms Level: 01. Remember
Blooms Level: 02. Understand

38. _____ are newly discovered organelles believed to aid in transport of messenger RNA into the cytoplasm of eukaryotic cells.
A. vaults
B. ribosomes
C. peroxisomes
D. nucleoli
E. centrioles

Blooms Level: 01. Remember
Blooms Level: 02. Understand

39. Which of the following is not an example of an organ system?
A. digestive
B. lymphatic
C. respiratory
D. nervous
E. blood

Blooms Level: 01. Remember

40. The type of tissue that covers or lines structures is
A. epithelial tissue.
B. fibrous tissue.
C. adipose tissue.
D. contractile tissue.
E. skeletal tissue.

Blooms Level: 01. Remember
Blooms Level: 02. Understand

41. Spaces within bone or cartilage which house the living cells are called
A. chondrocytes.
B. lacunae.
C. osteoclasts.
D. intercalations.
E. cristae.

Blooms Level: 01. Remember

42. Fibrous connective tissue in the form of _____ connects bones to bones.
A. ligaments
B. fascia
C. tendons
D. adipose tissue
E. hyaline cartilage

Blooms Level: 01. Remember

43. Blood is considered to be a/an _____ tissue.
A. epithelial
B. liquid
C. hyaline
D. connective
E. adipose

Blooms Level: 01. Remember
Blooms Level: 02. Understand

44. Heart, lungs, and liver are examples of functional units called
A. tissues.
B. organelles.
C. systems.
D. histological entities.
E. organs.

Blooms Level: 01. Remember

45. Two organelles called _____ lie at right angles to each other near the nucleus and are involved with movement of the chromosomes during cell division.
A. centrioles
B. centrosomes
C. centromeres
D. concentricyclones
E. cycloses

Blooms Level: 01. Remember

46. _____ transports molecules made in the nucleus to various parts of the cell.
A. Centrioles
B. Barrels
C. Vaults
D. Autosomes
E. Motorists

Blooms Level: 01. Remember
Blooms Level: 02. Understand