

International Skin Beauty Academy

Chapter 18 Test: Body Structure and Function

Student Name: _____

Date: _____

Score: _____

Section 1 | True / False (27 points)

Directions: Circle True or False for each statement.

#	STATEMENT	TRUE	FALSE	HINT
1	The mitochondria are known as the "powerhouse" of the cell due to their ability to produce energy.	True	False	p. 456
2	Flagella are taillike structures that allow organisms to move.	True	False	p. 454
3	Genetic information and familial characteristics are carried within the Golgi apparatus.	True	False	p. 456
4	Each person's DNA and genetic makeup are inherited from the person's parents and other ancestors.	True	False	p. 462
5	Mitosis is usually followed immediately by cytokinesis.	True	False	p. 457
6	The lysosome is considered the "heart" of the cell.	True	False	p. 456
7	Meiosis is the cell division process that yields gametes, reproductive cells with half the number of chromosomes of the parent cells.	True	False	p. 457
8	Sickle cell anemia is a congenital neural tube defect.	True	False	p. 464
9	Talipes is a congenital disorder affecting eyesight.	True	False	p. 465
10	A congenital defect of the mouth arising from improper closing of the palatine bones is called a cleft palate.	True	False	p. 463
11	Structures found within the cytoplasm are called organelles.	True	False	p. 454
12	Structures within the nervous system include the brain, spinal cord, and nerves.	True	False	p. 461
13	Active transport is a method in which cellular energy is used so that cells can obtain what they need from tissue fluid.	True	False	p. 458
14	The diffusion of water from lower to higher concentration through a membrane is called osmosis.	True	False	p. 458
15	Nerve tissue has two main properties: excitability and conductivity.	True	False	p. 458
16	Sweat that results from heavy exercise increases the concentration of electrolytes in the body.	True	False	p. 462
17	DNA provides the cell's blueprint, or genetic makeup.	True	False	p. 456
18	The brain, stomach, and kidneys are all examples of body systems.	True	False	p. 461
19	Fe is the chemical symbol for iron.	True	False	p. 454
20	The nucleus is the control center of the cell.	True	False	p. 454
21	The muscular system produces movement, maintains posture, and produces heat.	True	False	p. 460
22	Every cell has three components: a cell membrane, cytoplasm, and a nucleus.	True	False	p. 454
23	The ovaries and testes are structures within the reproductive and the endocrine systems.	True	False	p. 461
24	The symbol for sodium is S.	True	False	p. 454
25	The formation of a zygote is the earliest stage of an embryo.	True	False	p. 458
26	Fat is also called adipose tissue, which is a type of loose connective tissue.	True	False	p. 458

#	STATEMENT	TRUE	FALSE	HINT
27	Everyone's DNA has the same chemical structure.	True	False	p. 462

Section 2 | Multiple Choice (54 points)

Directions: Circle the letter of the single best answer for each question.

1. _____ is the study of the structures of an organism.

- A) Physiology
- B) Anatomy
- C) Pathophysiology
- D) Homeostasis

Hint: p. 453

2. _____ is the study of the function of an organism.

- A) Physiology
- B) Anatomy
- C) Pathophysiology
- D) Homeostasis

Hint: p. 453

3. _____ is the study of diseases and disorders that affect organisms.

- A) Physiology
- B) Anatomy
- C) Pathophysiology
- D) Homeostasis

Hint: p. 453

4. The most basic level of the body's organization is the _____.

- A) atom
- B) molecule
- C) organelle
- D) cell

Hint: p. 454

5. The _____ is one of the most basic units of life and is often described as the basic building block of the human body.

- A) atom
- B) molecule
- C) organelle
- D) cell

Hint: p. 454

6. The _____ allows passage of substances into and out of the cell.

- A) organelle
- B) nucleus
- C) DNA
- D) cell membrane

Hint: p. 454

7. _____ are organelles that aid in the digestion of nutrients and other materials.

- A) Cytoplasm
- B) Lysosomes
- C) Mitochondria
- D) Ribosomes

Hint: p. 456

8. _____ are paired organelles that are found lying at 90-degree angles near the nucleus.

- A) Mitochondria
- B) Endoplasmic reticula
- C) Centrioles
- D) Golgi apparatus

Hint: p. 456

9. The _____ is a saclike membranous structure that sorts, modifies, and transports various proteins throughout the cell.

- A) mitochondrion
- B) endoplasmic reticulum
- C) centriole
- D) Golgi apparatus

Hint: p. 456

10. The _____ is a network of tubules that can be rough or smooth. It is attached to the nuclear membrane.

- A) mitochondrion
- B) endoplasmic reticulum
- C) centriole
- D) Golgi apparatus

Hint: p. 456

11. Small, hair-like projections called _____ increase the surface area of a cell and propel substances along the cell's surface, increasing the cell's absorption ability.

- A) cilia
- B) mitosis
- C) cytokinesis
- D) kinetochores

Hint: p. 454

12. Reproductive cells are formed by a cellular division called _____.

- A) meiosis
- B) cytokinesis
- C) anaphase
- D) mitosis

Hint: p. 457

13. Specialized cells with the same function and purpose group together to form _____.

- A) tissues
- B) organs
- C) systems
- D) other cells

Hint: p. 458

14. _____ or involuntary muscle tissue is found in the viscera (walls of hollow organs).

- A) Rough
- B) Cardiac
- C) Skeletal
- D) Smooth

Hint: p. 458

15. In _____, the cell engulfs a solid particle, such as a bacterium.

- A) phagocytosis
- B) pinocytosis
- C) genetics
- D) mitosis

Hint: p. 458

16. Color _____ usually involves difficulty distinguishing between reds and greens and is an inherited, sex-linked disorder, usually passed from mother to son.

- A) deficiency
- B) absence
- C) sightlessness
- D) decrease

Hint: p. 463

17. A mother who gives birth after age _____ has a higher risk of delivering an infant with Down syndrome.

- A) 20
- B) 30
- C) 40
- D) 50

Hint: p. 463

18. Molecules are closest together and move most slowly when they are in a(n) _____ state.

- A) solid
- B) liquid
- C) gaseous
- D) altered

Hint: p. 454

19. The _____, which is known as the control center of the cell, contains genetic information packaged in the form of chromosomes.

- A) neutron
- B) proton
- C) nucleus
- D) electron

Hint: p. 454

20. Which of the following is not one of the four types of tissue found in the human body?

- A) epithelial
- B) connective
- C) muscle
- D) endothelial

Hint: p. 458

21. _____ allow cells to maintain electric voltage across their membranes.

- A) Electric currents
- B) Electronics
- C) Electrolytes
- D) Enzymes

Hint: p. 461

22. _____ is the study of the hereditary makeup of animals or plants.

- A) Phagocytosis
- B) Pinocytosis
- C) Genetics
- D) DNA

Hint: p. 462

23. _____ engineering involves changing an organism's existing DNA.

- A) Genetic
- B) Reverse
- C) Biological
- D) Chemical

Hint: p. 462

24. _____ is the transfer of genetic traits from parent to child.

- A) DNA
- B) Disease
- C) Inheritance
- D) Heredity

Hint: p. 462

25. A(n) _____ is a medical condition caused by mutations in a gene or set of genes.

- A) anabolic process
- B) disease
- C) genetic disorder
- D) catabolic process

Hint: p. 463

26. _____ is a recessive gene mutation that causes hereditary lack of pigment in the skin, hair, and eyes.

- A) Attention deficit hyperactivity disorder (ADHD)
- B) Color deficiency
- C) Albinism
- D) Autism

Hint: p. 463

27. Hemochromatosis affects nearly 4 in _____ European individuals.

- A) 10
- B) 100
- C) 1,000
- D) 10,000

Hint: p. 464

28. Most children with Tay-Sachs disease (TSD) die before their _____ birthday.

- A) third
- B) fifth
- C) seventh
- D) tenth

Hint: p. 465

29. Tissues with similar functions form _____.

- A) skin
- B) organs
- C) systems
- D) cells

Hint: p. 458

30. _____ is achieved when systems work together to maintain balance or equilibrium, adjusting to constant changes.

- A) Homeostasis
- B) Homeopathology
- C) Homogenization
- D) Homeoplasticity

Hint: p. 453

31. Chromatids move to opposite ends of the cell during which phase of mitosis?

- A) Anaphase
- B) Metaphase
- C) Prometaphase
- D) Telophase

Hint: p. 457

32. The body's fluids—including blood, plasma, and interstitial fluid—contain high concentrations of _____.

- A) potassium
- B) sodium chloride
- C) iron
- D) sulfate

Hint: p. 461

33. A(n) _____ is an ion that is positively charged.

- A) cation
- B) anion
- C) neutron
- D) molecule

Hint: p. 461

34. Which tissue forms the skin, tubes, ducts, and glands and lines the body cavities?

- A) Epithelial
- B) Connective
- C) Muscle
- D) Nerve

Hint: p. 458

35. _____ tissue is the most abundant type of tissue in the human body.

- A) Connective
- B) Epithelial
- C) Muscle
- D) Nerve

Hint: p. 458

36. Which of the following is not one of the four functions of epithelial tissue?

- A) Connection
- B) Protection
- C) Absorption
- D) Secretion

Hint: p. 458

37. The method by which a cell "drinks" the fluid it requires is known as _____.

- A) phagocytosis
- B) pinocytosis
- C) anabolism
- D) catabolism

Hint: p. 458

38. _____ muscle tissue is found only in the heart.

- A) Rough
- B) Cardiac
- C) Skeletal
- D) Smooth

Hint: p. 458

39. Mitosis is divided into _____ stages.

- A) two
- B) three
- C) four
- D) five

Hint: p. 457

40. _____ tissue includes blood and lymph.

- A) Epithelial
- B) Connective
- C) Muscle
- D) Nerve

Hint: p. 458

41. Which of the following processes doesn't require the cell to use energy?

- A) Active transport
- B) Passive transport
- C) Phagocytosis
- D) Pinocytosis

Hint: p. 458

42. The nose, mouth, and pharynx are part of which system?

- A) Skeletal
- B) Digestive
- C) Respiratory
- D) Endocrine

Hint: p. 461

43. _____ tissue is controlled by the autonomic nervous system.

- A) Epithelial
- B) Connective
- C) Striated muscle
- D) Smooth muscle

Hint: p. 458

44. The muscles that cannot be consciously controlled are called _____.

- A) voluntary
- B) involuntary
- C) mandatory
- D) selective

Hint: p. 458

45. What is a molecule that conducts electricity is called?

- A) Electrolyte
- B) Atom
- C) Cation
- D) Anion

Hint: p. 461

46. Temperature regulation is a main function of the _____ system.

- A) integumentary
- B) skeletal
- C) nervous
- D) cardiovascular

Hint: p. 460

47. The _____ system helps a person maintain posture.

- A) integumentary
- B) muscular
- C) nervous
- D) cardiovascular

Hint: p. 460

48. The _____ system helps to maintain the acid-base balance of the body.

- A) cardiovascular
- B) digestive
- C) urinary
- D) reproductive

Hint: p. 460

49. Which of the following is not an electrolyte found in the body?

- A) Sodium
- B) Potassium
- C) Zinc
- D) Magnesium

Hint: p. 462

50. Which of the following is not part of the digestive system?

- A) Gallbladder
- B) Pancreas
- C) Urethra
- D) Appendix

Hint: p. 461

51. The chemical process that creates molecules out of smaller components with the help of energy is _____.

- A) catabolism
- B) active transport
- C) anabolism
- D) mitochondria

Hint: p. 462

52. The _____ system stimulates the body's immune response to protect the body.

- A) lymphatic
- B) endocrine
- C) digestive
- D) integumentary

Hint: p. 460

53. _____ involves the movement of dissolved particles from an area of greater concentration to an area of lesser concentration.

- A) Diffusion
- B) Osmosis
- C) Active transport
- D) Filtration

Hint: p. 458

54. _____ occurs when digestion of food takes place.

- A) Anabolism
- B) Catabolism
- C) Phagocytosis
- D) Pinocytosis

Hint: p. 462