



### Sample Test – v.3

- ❖ Indicate the correct answers on the answer sheet with “×”.
- ❖ For each question there is only one correct answer. Multiple answers will be scored as incorrect.

1. **The functions of connective tissue are:**
  - A. Storage, secretion, isolation
  - B. Protection, secretion, transport
  - C. Support, protection, storage, isolation
  - D. Contraction, transport, conductivity
2. **What is the bone surface covered with?**
  - A. Yellow bone marrow
  - B. Red bone marrow
  - C. Periosteum
  - D. Adipose tissue
3. **Epithelial tissue is characterized by each of these traits, EXCEPT that \_\_\_\_\_.**
  - A. It lacks blood vessels.
  - B. It functions in secretion, absorption, and excretion.
  - C. Epithelial cells are loosely packed and have much intercellular material.
  - D. It is anchored to a basement membrane.
4. **What is the skeletal system?**
  - A. All the bones in the body.
  - B. All the muscles and tendons.
  - C. All the body's organs, both soft and hard tissue.
  - D. All the bones in the body and the tissues that connect them.
5. **How many bones are there in the average person's body?**
  - A. 33
  - B. 206
  - C. 639
  - D. 106
6. **Which of the following statement is INCORRECT?**
  - A. Bone is where most blood cells are made.
  - B. Bone serves as a storehouse for various minerals.
  - C. Bone is a dry and non-living supporting structure.
  - D. Bone protects and supports the body and its organs.
7. **Besides the brain, the skull also protects:**
  - A. The lungs
  - B. The diaphragm
  - C. The body's cells
  - D. The sense organs
8. **What makes bones so strong?**
  - A. Silica
  - B. Cartilage
  - C. Blood and marrow
  - D. Calcium and phosphorous
9. **The tongue is covered with:**
  - A. Cartilage
  - B. Periosteum
  - C. Connective tissue
  - D. Epithelial tissue
10. **The basic structural and functional unit of the kidneys is the:**
  - A. Urethra
  - B. Pelvis
  - C. Nephron
  - D. Bladder
11. **Which muscle tissue is multinucleate, voluntary, and bears striations?**
  - A. Skeletal muscle.
  - B. Smooth muscle.
  - C. Multiunit smooth muscle.
  - D. Cardiac muscle.

**12. The kidney tubules are lined with \_\_\_\_\_ epithelial cells.**

- A. Columnar.
- B. Cuboidal.
- C. Squamous.
- D. Ciliated.

**13. What are the two main functions of the pancreas?**

- A. The manufacture of digestive juices and the production of the hormone insulin.
- B. The storage of bile and the production of the hormone oestrogen.
- C. The filtering of waste products and the manufacture of immune system cells.

**14. How does the liver contribute to digestion?**

- A. It grinds food.
- B. It removes excess water and returns it to the bloodstream.
- C. It processes food nutrients.
- D. It supports digestive processes by supplying substances useful to the digestive process

**15. The heart has \_\_\_\_\_ chambers.**

- A. 2
- B. 4
- C. 6
- D. 3

**16. The thickest layer of the heart, which comprises all cardiac muscles is the:**

- A. Pericardium
- B. Myocardium
- C. Endocardium
- D. Periosteum

**17. The protein that makes RBCs red is:**

- A. Globulin
- B. Hemoglobin
- C. Myoglobin
- D. Albumin

**18. A major role in secretion is played by a membrane bound organelle, called:**

- A. Lysosome
- B. Ribosome
- C. Golgi complex

D. Nucleus

**19. What is the central nervous system (CNS)?**

- A. The brain and the spinal cord.
- B. The brain and the heart.
- C. The heart and the spinal cord.
- D. The spinal cord and the lungs.

**20. The monomers of proteins are:**

- A. Amino acids.
- B. Nucleotides.
- C. Nitrogen bases.
- D. Monosaccharides.

**21. Which of the following statements is NOT true? Catalytic functions are characteristic of:**

- A. RNA.
- B. DNA.
- C. Proteins.
- D. Enzymes.

**22. Which of the biopolymers have all of the following biological functions of: storage of genetic information, transcription of genetic information, formation of inner cell structures, catalytic functions?**

- A. DNA.
- B. RNA.
- C. proteins.
- D. polysaccharides.

**23. The quaternary structure of proteins is characterized by:**

- A. The folding of polypeptide chain into a beta sheet.
- B. The folding of polypeptide chain into a uniform spiral.
- C. It is present only in proteins with catalytic functions.
- D. It is built up of several polypeptide chains.

**24. The active transport is:**

- A. Also called osmosis.
- B. An energy-dependent process.
- C. Directed from the higher toward the lower concentration.
- D. Also called diffusion.

**25. Ribosomes:**

- A. Are only found in prokaryotic cells.
- B. Can be free or bonded to the endoplasmic reticulum.
- C. Are synthesized in the nucleus of prokaryotic cells.
- D. Are only found in eukaryotic cells.

**26. Main function of Golgi complex is:**

- A. The synthesis of proteins and lipids.
- B. Formation of ribosomes.
- C. Packing of secretions.
- D. Synthesis of sugars and proteins.

**27. Secretory vesicles are formed by:**

- A. The Golgi complex.
- B. The lysosomes.
- C. The mitochondria.
- D. Nucleus.

**28. Which of the following characteristics are common for both mitochondria and chloroplasts?**

- A. They are found in all organisms.
- B. The synthesis of ATP in electron-carrying chains takes place within them.
- C. They use equal energy sources for ATP synthesis.
- D. They contain DNA.

**29. Which of the following structures is common for both plant and animal cells?**

- A. Mitochondria.
- B. Cell wall.
- C. Chloroplast.
- D. Glycocalyx.

**30. Bacteria:**

- A. Are only unicellular.
- B. Have nuclei.
- C. Are eukaryotic organisms.
- D. Obtain energy only through the breaking down of substances in the absence of oxygen.

**31. The biocatalysts are:**

- A. Substances of sugar nature.
- B. Deoxyribonucleic acids.
- C. Specific.

- D. Nonspecific.

**32. DNA replication results in:**

- A. 2 completely new DNA molecules.
- B. 1 new DNA molecule, 1 old DNA molecule is conserved.
- C. 2 DNA molecules that each contains a strand of the original.
- D. 1 new RNA molecule

**33. Catabolic processes:**

- A. Are reduction processes.
- B. Are dissimilative processes.
- C. Cause biosynthesis of macromolecules.

**34. Which of the following compounds are end products in the Krebs cycle and the respiratory chain?**

- A. Carbon dioxide, water and ATP.
- B. Oxalic acid.
- C. Citric acid.
- D. Pyruvic acid.

**35. Coenzyme A is:**

- A. A protein.
- B. A strong reducer.
- C. A compound that participates in the biosynthesis of proteins.
- D. A key intermediate metabolite.

**36. A dominant gene usually shows itself over a:**

- A. Homozygous gene.
- B. Heterozygous gene.
- C. Recessive gene.
- D. Sex-linked trait.

**37. Oxidative phosphorylation is a process in which:**

- A. Is synthesized organic compounds
- B. Energy is temporarily stored in an usable form
- C. Metabolites are transported
- D. Alleles are assorted

**38. Autotrophs are:**

- A. Organisms that are able to synthesize organic compounds with the aid solar energy
- B. Heterozygous individuals

- C. Organisms that synthesize organic compounds with the aid energy, obtained from catabolic processes
- D. Organisms that live and grow in the absence of molecular oxygen

**39. An allele is:**

- A. A phenotype
- B. A homozygous genotype
- C. A heterozygous genotype
- D. One of several possible forms of a gene

**40. Mitosis consists of the following phases in a specific order:**

- A. Interphase, prophase, metaphase, anaphase
- B. Interphase, prophase, metaphase, telophase
- C. Prophase I, prophase II, metaphase, anaphase
- D. Prophase, metaphase, anaphase, telophase