

**BIOLOGY EXAM Sample Test – v.3****Part A: Multiple Choice Questions**

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

1. **The only major type of tissue specialized for movement is the _____ tissue.**
 - A. Nervous
 - B. Epithelial
 - C. Muscle
 - D. Connective
2. **The contraction of the myocardium of the heart atria and ventricles is called:**
 - A. Diastole
 - B. Heart beat
 - C. Systole
 - D. Cardiac output
3. **Striated muscle is also called:**
 - A. Cardiac muscle
 - B. Smooth muscle
 - C. Skeletal muscle
 - D. Involuntary muscle
4. **Which type of tissue builds glands?**
 - A. Connective
 - B. Nervous
 - C. Muscle
 - D. Epithelial
5. **Ligaments and tendons are formed of:**
 - A. Epithelial tissue
 - B. Muscle tissue
 - C. Cartilage
 - D. Connective tissue
6. **What type of tissue is found in the iris, hair follicle, and anus?**
 - A. Skeletal tissue
 - B. Cardiac muscle tissue
 - C. Smooth muscle tissue
 - D. All of the above
7. **The oxygen transport from the lungs to all cells of the organism is a function of the:**
 - A. Platelets
 - B. Red blood cells
 - C. White blood cells
 - D. Leucocytes
8. **Which muscle tissue is multinucleated and bears striations?**
 - A. Skeletal muscle.
 - B. Smooth muscle.
 - C. Multiunit smooth muscle.
 - D. Cardiac muscle.
9. **The heart has _____ chambers.**
 - A. 2
 - B. 4
 - C. 6
 - D. 3
10. **The longest bone in the body is the:**
 - A. Spine
 - B. Femur
 - C. Humerus
 - D. Ulna
11. **Homeostasis in the human body is a condition of:**
 - A. Constant temperature
 - B. Constant concentration of the salts dissolved in the blood
 - C. Dynamic equilibrium
 - D. Dynamic gas exchange
12. **The blood serum:**
 - A. Contains white blood cells
 - B. Does not contain fibrinogen
 - C. Contains erythrocytes
 - D. Does not contain water

- 13. Which is the first digestive juice secreted in the alimentary canal?**
- A. Hydrochloric acid
 - B. Saliva
 - C. Pancreatic digestive juice
 - D. Bile
- 14. The membrane on the surface of a lung is called the:**
- A. Viscera
 - B. Pleura
 - C. Pericardium
 - D. Periosteum
- 15. Anterior and posterior lobes are found in:**
- A. Thyroid gland
 - B. Parathyroid glands
 - C. Pituitary gland
 - D. Adrenal glands
- 16. This vessel carries de-oxygenated blood from the heart to the lungs.**
- A. Aorta
 - B. Main Pulmonary Artery
 - C. Upper Vena Cava
 - D. Portal vein
- 17. Fluid part of blood after removal of corpuscles is:**
- A. Plasma
 - B. Lymph
 - C. Water
 - D. Vaccine
- 18. A type of nucleated blood cells are the:**
- A. Red blood cells
 - B. Hepatocytes
 - C. Platelets
 - D. Monocytes
- 19. Physical and chemical changes or reactions that occur within the body are collectively known as:**
- A. Metabolism
 - B. Physiology
 - C. Assimilation
 - D. Excretion
- 20. In terms of biochemistry, what type of process is the breakdown of glucose to H_2O and CO_2 ?**
- A. Anabolic
 - B. Autotrophic
 - C. Catabolic
 - D. Aerobic
- 21. DNA transcription results in:**
- A. RNA molecule
 - B. 2 DNA molecules that each contains a strand of the original one
 - C. 1 new DNA molecule and 1 RNA molecule
 - D. Polypeptide molecule
- 22. A homozygous diploid organism has two _____ of a gene.**
- A. identical alleles
 - B. maternal molecules
 - C. identical codons
 - D. different alleles
- 23. When a dominant allele is present the offspring will show _____ characteristics.**
- A. Recessive
 - B. Dominant
 - C. Homozygous
 - D. Heterozygous
- 24. In _____, centromeres part and one set of chromosomes is pulled to each end of the cell.**
- A. Prophase
 - B. Metaphase
 - C. Anaphase
 - D. Telophase
- 25. The endoplasmic reticulum is best described as a:**
- A. Formless liquid
 - B. Cellular inclusion
 - C. Network of interconnected membranes
 - D. Membranous sac
- 26. Organelles called _____ provide energy from the products of digestion.**
- A. Endoplasmic reticulum
 - B. Mitochondria
 - C. Lysosomes
 - D. Golgi complex

27. The fundamental units of life are:

- A. Genes
- B. Alleles
- C. Chromosomes
- D. Cells

28. Which substance breaks down the bonds between amino acids?

- A. Amylase
- B. Pepsin
- C. Lipase
- D. All of the above

29. Which of the following nitrogen bases is a component of ATP:

- A. adenine
- B. cytosine
- C. thymine
- D. guanine

30. What substance is stored in the nucleus?

- A. DNA
- B. ATP
- C. Enzymes
- D. Protein

31. When is DNA copied?

- A. Metaphase
- B. Interphase
- C. Anaphase
- D. First phase

32. 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

33. The allele that masks the effects of the other is _____ and the masked allele is _____.

- A. Homozygous, heterozygous
- B. Homozygous, recessive
- C. Dominant, recessive
- D. Dominant, incomplete

34. Crossing over takes place during _____.

- A. meiosis

- B. mitosis
- C. segregation
- D. linkage

35. If a father have type A blood and the mother has type AB, they would NOT have a child with which of the following blood types?

- A. O
- B. A
- C. B
- D. AB

36. Down's syndrome is caused by _____ of the number ____ chromosome.

- A. monosomy, 23
- B. deletion, 21
- C. trisomy, 21
- D. trisomy, 23

37. Color blindness, a sex linked trait, appears more often in _____ than in _____.

- A. males, females
- B. females, males
- C. dogs, cats
- D. neither

38. Which of the following human traits is not a polygenic trait?

- A. skin color
- B. eye color
- C. height
- D. ABO blood type

39. The inheritance of human blood types is controlled by _____ alleles.

- A. different
- B. same
- C. one
- D. multiple

40. In a monohybrid cross between a homozygous dominant parent and a homozygous recessive parent, the F1 offspring will all have _____ genotypes, and the F1 phenotypes will resemble the _____ parent.

- A. heterozygous, dominant
- B. heterozygous, recessive
- C. homozygous, dominant
- D. homozygous, recessive

Part B: Short Answer Questions

- 1. How does adrenaline affect myocardial contraction?**
- 2. What are the blood vessels that carry blood into the right atrium?**
- 3. Name the process in which the passage of water goes from a region of higher concentration to a region of lower concentration through a semi permeable membrane?**
- 4. In what organelle does the Krebs cycle occur?**
- 5. What are the alleles of the gene that control blood type?**