

Advanced Human Physiology and Health

Life Science · Practice Test · 15 Questions

1. Which specific hormone is primarily responsible for the stimulation of osteoclasts to increase serum calcium levels?

- A) Calcitonin
- B) Parathyroid hormone
- C) Thyroxine
- D) Aldosterone

2. What is the functional unit of the kidney responsible for the filtration of blood and the formation of urine?

- A) Glomerulus
- B) Nephron
- C) Ureter
- D) Renal pelvis

3. In the human cardiac cycle, the 'lub' sound corresponds to the closure of which valves?

- A) Aortic and pulmonary valves
- B) Mitral and tricuspid valves
- C) Aortic and mitral valves
- D) Pulmonary and tricuspid valves

4. The primary site of lipid digestion in the human digestive system is the:

- A) Stomach
- B) Esophagus
- C) Small intestine
- D) Large intestine

5. Which protein is the most abundant in the human body, providing structural integrity to connective tissues?

- A) Keratin
- B) Myosin
- C) Collagen
- D) Elastin

6. What is the name of the process by which glucose is broken down into pyruvate in the cytoplasm of the cell?

- A) Krebs cycle
- B) Glycolysis
- C) Oxidative phosphorylation
- D) Gluconeogenesis

7. Which leukocyte type is the first to arrive at the site of acute inflammation and is highly phagocytic?

- A) Basophil
- B) Eosinophil
- C) Neutrophil
- D) Lymphocyte

8. The structure within the inner ear that converts mechanical vibrations into nerve impulses is the:

- A) Cochlea
- B) Semicircular canals
- C) Stapes
- D) Tympanic membrane

9. Which mineral is a crucial cofactor for over 300 enzymatic reactions in the body and is essential for DNA synthesis?

- A) Iron
- B) Magnesium
- C) Calcium
- D) Potassium

10. What is the primary function of the myelin sheath in peripheral neurons?

- A) To produce neurotransmitters
- B) To increase the speed of action potential conduction
- C) To store glucose for energy
- D) To provide structural support to the cell body

11. Which specific immunoglobulin is the most abundant in the human circulatory system, accounting for about 75-80% of all antibodies?

- A) IgA
- B) IgE
- C) IgG
- D) IgM

12. The conversion of fibrinogen to fibrin during blood coagulation is catalyzed by which enzyme?

- A) Plasmin
- B) Thrombin
- C) Heparin
- D) Prothrombin

13. Which lobe of the human brain is primarily responsible for processing visual information?

- A) Frontal lobe
- B) Parietal lobe
- C) Temporal lobe
- D) Occipital lobe

14. What is the term for the total volume of air that can be exhaled after a maximal inhalation?

- A) Tidal volume
- B) Vital capacity
- C) Residual volume
- D) Inspiratory reserve volume

15. Which of the following cells are responsible for the production of insulin in the islets of Langerhans?

- A) Alpha cells
- B) Beta cells
- C) Delta cells
- D) Gamma cells