

Advanced Human Physiology and Health

Health Education · Answer Key · 12 Questions

1. Which 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) Loop of Henle
- C) Nephron**
- D) Renal corpuscle

3. In the human cardiac cycle, what does the P wave on an electrocardiogram (ECG) represent?

- A) Ventricular repolarization
- B) Atrial depolarization**
- C) Ventricular depolarization
- D) Atrial repolarization

4. Which immunoglobulin is the most abundant in the human circulatory system and is the only one capable of crossing the placenta?

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

5. What is the primary function of the Kupffer cells located in the hepatic sinusoids of the liver?

- A) Bile production
- B) Phagocytosis of pathogens**
- C) Glycogen storage
- D) Lipid metabolism

6. Which mineral is a crucial cofactor for the enzyme superoxide dismutase and is essential for the stabilization of DNA structure?

A) Zinc

B) Magnesium

C) Potassium

D) Iron

7. What is the anatomical structure that prevents food from entering the trachea during the swallowing process?

A) Pharynx

B) Larynx

C) Epiglottis

D) Esophagus

8. The conversion of angiotensin I to angiotensin II is catalyzed by an enzyme primarily found in the endothelium of which organ?

A) Kidneys

B) Liver

C) Lungs

D) Adrenal glands

9. Which specific neurotransmitter is primarily depleted in the substantia nigra of patients suffering from Parkinson's disease?

A) Acetylcholine

B) Serotonin

C) GABA

D) Dopamine

10. Where does the majority of nutrient absorption occur within the human digestive tract?

A) Stomach

B) Duodenum

C) Jejunum

D) Cecum

11. Which blood vessel is the only artery in the adult human body that carries deoxygenated blood?

A) Pulmonary artery

B) Carotid artery

C) Hepatic artery

D) Aorta

12. What is the normal pH range of human arterial blood?

A) 6.80-7.00

B) 7.35-7.45

C) 7.60-7.80

D) 7.00-7.20