

Advanced Health Science Foundations

Health Education · Practice Test · 20 Questions

1. Which specific cranial nerve is primarily responsible for the parasympathetic innervation of the heart, lungs, and digestive tract?

- A) Vagus nerve
- B) Trigeminal nerve
- C) Glossopharyngeal nerve
- D) Accessory nerve

2. What is the clinical term for the abnormal accumulation of fluid in the peritoneal cavity, often associated with liver cirrhosis?

- A) Ascites
- B) Edema
- C) Effusion
- D) Hydrops

3. Which vitamin deficiency is the primary cause of Beriberi, a disease affecting the peripheral nervous system and cardiovascular system?

- A) Thiamine (B1)
- B) Niacin (B3)
- C) Cobalamin (B12)
- D) Ascorbic acid (C)

4. In immunology, which cell type is the primary producer of antibodies (immunoglobulins) in response to antigens?

- A) Plasma cells
- B) Cytotoxic T cells
- C) Natural Killer cells
- D) Macrophages

5. The Rhesus (Rh) factor, a common blood antigen, is specifically named after which animal model used in its discovery?

- A) Rhesus macaque
- B) Rat
- C) Rabbit
- D) Rhesus sparrow

6. What is the primary function of the hormone erythropoietin, secreted by the kidneys?

- A) Stimulation of red blood cell production
- B) Regulation of blood glucose
- C) Control of electrolyte balance
- D) Stimulation of platelet aggregation

7. Which phase of the cell cycle is characterized by the replication of DNA?

- A) S phase
- B) G1 phase
- C) G2 phase
- D) M phase

8. In the context of epidemiology, what does the term 'basic reproduction number' (R_0) represent?

- A) Average secondary infections produced by one case in a susceptible population
- B) The mortality rate of a pathogen
- C) The incubation period of a virus
- D) The vaccination coverage threshold

9. Which organ is responsible for the synthesis of the majority of plasma proteins, including albumin?

- A) Liver
- B) Spleen
- C) Pancreas
- D) Gallbladder

10. What condition is defined by a fasting plasma glucose level of 126 mg/dL (7.0 mmol/L) or higher on two separate occasions?

- A) Diabetes Mellitus
- B) Hypoglycemia
- C) Hyperinsulinemia
- D) Gestational Diabetes

11. Which hormone, produced by the adrenal cortex, is primarily responsible for regulating sodium retention and potassium excretion in the kidneys?

- A) Aldosterone
- B) Cortisol
- C) Adrenaline
- D) DHEA

12. What is the anatomical term for the functional unit of the kidney responsible for urine formation?

- A) Nephron
- B) Neuron
- C) Glomerulus
- D) Alveolus

13. Which neurological condition is characterized by the degeneration of dopamine-producing neurons in the substantia nigra?

- A) Parkinson's disease
- B) Alzheimer's disease
- C) Multiple Sclerosis
- D) Huntington's disease

14. What is the standard measurement unit for the refractive power of a lens, such as those used in eyeglasses?

- A) Diopter
- B) Dyne
- C) Decibel
- D) Dalton

15. Which structure in the human ear is responsible for transducing sound vibrations into electrical signals?

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

16. In genetics, what is the term for an individual having two identical alleles at a particular gene locus?

- A) Homozygous
- B) Heterozygous
- C) Hemizygous
- D) Polyploid

17. Which immunoglobulin class is the first to be produced in response to a primary infection?

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

18. What is the name of the connective tissue that connects muscle to bone?

- A) Tendon
- B) Ligament
- C) Fascia
- D) Cartilage

19. The 'SA node' (Sinoatrial node) is commonly known by what functional title in the human heart?

- A) Natural pacemaker
- B) Atrioventricular valve
- C) Bundle of His
- D) Purkinje fiber

20. Which mineral is a crucial structural component of the hemoglobin molecule, allowing for oxygen transport?

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