

Anatomy and Physiology Quiz

Biology · Answer Key · 30 Questions

1. What is the scientific study of the structure of living organisms called?

- A) Physiology
- B) Anatomy**
- C) Histology
- D) Cytology

2. Which subdivision of anatomy requires a microscope to view structures like cells and tissues?

- A) Gross anatomy
- B) Developmental anatomy
- C) Microscopic anatomy**
- D) Regional anatomy

3. Physiology is the study of the functions of living organisms and their parts. What does it explain?

- A) Body names and locations
- B) How organs and systems keep the body alive**
- C) The growth and changes across the lifespan
- D) Specific regions of the body

4. What is the primary function of the respiratory system?

- A) Voice production
- B) Olfaction
- C) Gas exchange**
- D) Temperature regulation

5. Which part of the respiratory system contains the vocal cords and produces sound?

- A) Trachea
- B) Pharynx
- C) Lungs
- D) Larynx**

6. What is the primary muscle of inspiration?

- A) Intercostal muscles
- B) Abdominal muscles
- C) Diaphragm**
- D) Lungs

7. The exchange of oxygen and carbon dioxide between the environment and the organism is known as:

- A) Internal respiration
- B) Cellular respiration
- C) External respiration**
- D) Metabolism

8. What is the primary function of the kidneys in the urinary system?

- A) Regulating breathing
- B) Filtering blood plasma**
- C) Producing hormones for growth
- D) Coordinating voluntary movements

9. What are the functional units of the kidneys called?

- A) Nephrons**
- B) Alveoli
- C) Neurons
- D) Hormones

10. Which part of the nephron is where blood plasma is filtered?

- A) Renal tubule
- B) Loop of Henle
- C) Glomerular capsule**
- D) Collecting duct

11. What are the three basic processes of urine formation?

- A) Inhalation, Exhalation, Gas Exchange
- B) Filtration, Reabsorption, Secretion**
- C) Sensation, Integration, Response
- D) Metabolism, Catabolism, Anabolism

12. The central nervous system (CNS) is composed of which two main parts?

- A) Brain and spinal nerves
- B) Brain and cranial nerves
- C) Brain and spinal cord**
- D) Spinal cord and peripheral nerves

13. What is the main function of the peripheral nervous system (PNS)?

- A) Processing sensory information and sending motor commands
- B) Acting as the control center for the entire body
- C) Connecting the CNS to the rest of the body**
- D) Regulating involuntary functions like heart rate

14. Which division of the nervous system controls voluntary activities?

- A) Autonomic Nervous System (ANS)
- B) Somatic Nervous System (SNS)**
- C) Enteric Nervous System (ENS)
- D) Central Nervous System (CNS)

15. Which lobe of the cerebrum is primarily responsible for vision?

- A) Frontal Lobe
- B) Parietal Lobe
- C) Temporal Lobe
- D) Occipital Lobe**

16. The thalamus acts as a relay station for almost all sensory information EXCEPT for which sense?

- A) Touch
- B) Pain
- C) Smell**
- D) Hearing

17. Which part of the brain is responsible for regulating body temperature, hunger, and thirst?

- A) Cerebrum
- B) Cerebellum
- C) Hypothalamus**
- D) Medulla Oblongata

18. What is the primary role of the cerebellum?

- A) Processing visual information
- B) Coordinating voluntary movements and balance**
- C) Regulating breathing and heart rate
- D) Relaying sensory information to the cortex

19. Which part of the brainstem controls vital life-sustaining functions like heart rate and breathing?

- A) Pons
- B) Midbrain
- C) Cerebellum
- D) Medulla Oblongata**

20. What are the three protective layers surrounding the brain and spinal cord called?

- A) Ventricles
- B) Meninges**
- C) Cerebrospinal fluid
- D) Dural sinuses

21. What is the main function of cerebrospinal fluid (CSF)?

- A) Transmitting motor commands
- B) Providing mechanical protection and chemical stability**
- C) Carrying oxygen to the brain
- D) Regulating blood pressure

22. The blood-brain barrier (BBB) prevents harmful substances from entering the brain. What type of substances can easily cross it by simple diffusion?

- A) Water-soluble substances
- B) Ions
- C) Lipid-soluble substances**
- D) Large proteins

23. The sympathetic nervous system is often referred to as the 'fight or flight' system. What does it prepare the body for?

- A) Rest and digestion
- B) Stressful or emergency situations**
- C) Sleep and relaxation
- D) Cognitive tasks

24. Which division of the autonomic nervous system promotes energy conservation and rest?

- A) Sympathetic Nervous System
- B) Somatic Nervous System
- C) Parasympathetic Nervous System**
- D) Enteric Nervous System

25. What is the primary neurotransmitter released by postganglionic sympathetic neurons (except for sweat glands)?

- A) Acetylcholine
- B) Dopamine
- C) Serotonin
- D) Noradrenaline**

26. The parasympathetic nervous system originates from which regions of the CNS?

- A) Thoracic and lumbar segments
- B) Cranial and sacral regions**
- C) Cervical and thoracic segments
- D) Lumbar and sacral segments

27. What is a dermatome?

- A) An area of skin supplied by a single spinal nerve's sensory fibers**
- B) A group of muscles supplied by a single spinal nerve's motor fibers
- C) A network of nerves formed by ventral rami
- D) A protective covering of the spinal cord

28. Which nerve plexus supplies the entire upper limb?

- A) Cervical Plexus
- B) Lumbar Plexus
- C) Brachial Plexus**
- D) Sacral Plexus

29. How many pairs of cranial nerves are there in the human body?

- A) 8
- B) 10
- C) 12**
- D) 31

30. Which cranial nerve is primarily responsible for vision?

- A) Olfactory nerve (CN I)
- B) Optic nerve (CN II)**
- C) Oculomotor nerve (CN III)
- D) Trigeminal nerve (CN V)