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Question: What are the three kinds of neurons?

a) Sensory, interneurons, and motor neurons

b) Motor, relay, and sensory neurons

c) Receptor, transmitter, and effector neurons

d) Sensor, connector, and effector neurons

Question: What is the function of sensory neurons?

a) Carry impulses away from the brain

b) Carry impulses to motor organs

c) Send impulses from receptors to the brain and spinal cord

d) Process information and analyze responses

Question: Which part of the nervous system is responsible for processing reflexes?

a) Cerebrum

b) Medulla oblongata

c) Pons

d) Spinal cord

Question: What is the main function of the central nervous system (CNS)?

a) Carries information to and from the CNS

b) Coordinates all body activities

c) Controls balance, posture, and coordination

d) Filters sensory information

Question: What part of the brain controls balance, posture, and coordination?

a) Brain stem

b) Cerebrum

c) Cerebellum

d) Hypothalamus

Question: What is the correct sequence in a reflex arc?

a) Motor neuron → interneuron → sensory neuron

b) Interneuron → motor neuron → sensory neuron

c) Sensory neuron → interneuron → motor neuron

d) Motor neuron → sensory neuron → interneuron

Question: What does the peripheral nervous system (PNS) consist of?

a) Only sensory neurons

b) Only motor neurons

c) Sensory and motor neurons

d) Only interneurons

Question: Where is urine stored before exiting the body?

a) Ureters

b) Renal pelvis

c) Urinary bladder

d) Bowman’s capsule

Question: In a reflex arc, what is the role of interneurons?

a) Carry impulses to motor organs

b) Send impulses from receptors to the brain

c) Process information and analyze responses

d) Connect sensory and motor neurons

Question: What is the primary function of the renal artery?

a) Transport urine to the bladder

b) Transport nutrients and wastes to the kidney

c) Reabsorb glucose

d) Filter blood in the glomerulus

Question: Which part of the ear is involved with the sensation of dizziness?

a) Cochlea

b) Semicircular canals

c) Ear canal

d) Tympanum

Question: What is the role of the loop of Henle in nephron filtration?

a) Reabsorption of glucose

b) Formation of urine

c) Filtration of blood

d) Flow of filtrate through collecting tubule

Question: Which of the following is NOT part of the excretory system?

a) Lungs

b) Skin

c) Stomach

d) Kidneys

Question: What is the outer portion of a kidney called?

a) Renal medulla

b) Renal cortex

c) Renal pelvis

d) Glomerulus

Question: How do steroid hormones differ from amino acid hormones in terms of their action?

a) Steroid hormones bind to receptors on the plasma membrane

b) Steroid hormones cause target cells to initiate protein synthesis

c) Amino acid hormones diffuse through the plasma membrane

d) Amino acid hormones are lipid-soluble

Question: What is the role of the semicircular canals in the auditory system?

a) Transmit information about body position and balance

b) Generate nerve impulses for sound perception

c) Store excess fluids and wastes

d) Filter blood in the glomerulus

Question: Evaluate the importance of the renal cortex in kidney function.

a) Compare it to the renal medulla

b) Explain its role in urine formation

c) Discuss its function in nutrient reabsorption

d) Describe the microscopic tubes in the renal cortex

Question: Design a diagram illustrating the components of a reflex arc.

a) Include labels for sensory, interneurons, and motor neurons

b) Depict the flow of a nerve impulse

c) Show the involvement of the central nervous system

d) Compare reflex arcs in different parts of the body

Question: Formulate a hypothesis about the impact of impaired renal function on fluid regulation in the body.

a) Describe the variables involved in the hypothesis

b) Propose a control group for comparison

c) Discuss potential outcomes of the experiment

d) Explain the role of the renal artery in the hypothesis

Question: What is the correct sequence of sound wave transmission in the ear to trigger an impulse?

a) Cochlea, incus, staple, eardrum

b) Tympanum, bones in the middle ear, cochlea, hair cells

c) Auditory canal, tympanum, hair cells, cochlea

d) Hair cells, auditory canal, cochlea, malleus

Question: Some rides at amusement parks cause a person to become dizzy when the ride stops. Which ear structure is most likely involved with the dizzy feeling?

a) Semicircular canals

b) Cochlea

c) Ear canal

d) Ear drum

Question: If there was a power outage in a movie theater and only a few dim emergency lights were lit, which cells of the retina would be most important for seeing your way to the exit?

a) Rods

b) Cones

c) Rods and cones are equally important

d) None of the above

Question: Which part of the nervous system is responsible for carrying information to and from the CNS?

a) Central nervous system

b) Peripheral nervous system

c) Sensory neurons

d) Motor neurons

Question: What is the role of free nerve endings in touch sensation?

a) Respond to temperature

b) Respond to pressure

c) Respond to pain

d) All of the above

Question: What is the primary function of the excretory system?

a) Regulate body temperature

b) Synthesize hormones

c) Remove toxins and wastes from the body

d) Facilitate digestion

Practice Test for grade 9 Advance

1. What are neurons responsible for in the body?

a. Digestion

b. Circulation

c. Communication and reaction

d. Respiration

Answer: c. Communication and reaction

2. Which part of the neuron receives signals called impulses from other neurons?

a. Axon

b. Cell body

c. Dendrites

d. Nucleus

Answer: c. Dendrites

3. What is the largest part of the brain responsible for thought processes, learning, and memory?

a. Cerebellum

b. Medulla oblongata

c. Cerebrum

d. Hypothalamus

Answer: c. Cerebrum

4. What is the function of the semicircular canals in the inner ear?

a. Vision

b. Balance and body position

c. Smell

d. Hearing

Answer: b. Balance and body position

5. What is the primary excretory organ in the body?

a. Lungs

b. Skin

c. Kidneys

d. Liver

Answer: c. Kidneys

6. What is the role of nephrons in the excretory system?

a. Filtration

b. Reabsorption

c. Formation of urine

d. All of the above

Answer: d. All of the above

7. Which part of the eye is most important for seeing in low light conditions?

a. Retina

b. Cornea

c. Lens

d. Sclera

Answer: a. Retina (rods)

8. Where are pain receptors found in the body?

a. Brain

b. Skin

c. Muscles

d. Eyes

Answer: b. Skin

9. What is responsible for maintaining homeostasis by linking the nervous and endocrine systems?

a. Hypothalamus

b. Pituitary gland

c. Thyroid gland

d. Adrenal gland

Answer: a. Hypothalamus

10. Which system is involved in a fight-or-flight response?

a. Nervous system

b. Endocrine system

c. Respiratory system

d. Digestive system

Answer: b. Endocrine system

11. How many kinds of neurons are there?

a. One

b. Two

c. Three

d. Four

Answer: c. Three

12. Which neurons carry impulses from receptors in the skin to the brain and spinal cord?

a. Sensory neurons

b. Interneurons

c. Motor neurons

d. Autonomic neurons

Answer: a. Sensory neurons

13. What is another name for a nerve impulse?

a. Action potential

b. Synaptic transmission

c. Impulse wave

d. Neuronal firing

Answer: a. Action potential

14. What is the minimum stimulus required to produce an action potential called?

a. Threshold

b. Peak potential

c. Resting potential

d. Excitatory potential

Answer: a. Threshold

15. What is the primary function of aldosterone?

a. Reducing inflammation

b. Raising blood glucose levels

c. Reabsorbing sodium

d. Affecting the kidneys

Answer: c. Reabsorbing sodium

16. Which glands are located just above the kidneys?

a. Thyroid glands

b. Adrenal glands

c. Pancreas

d. Pituitary glands

Answer: b. Adrenal glands

17. Which part of the brain is divided into two halves called hemispheres?

a. Cerebellum

b. Medulla oblongata

c. Cerebrum

d. Hypothalamus

Answer: c. Cerebrum

18. What is the fluid-filled structure in the inner ear that contributes to hearing?

a. Cochlea

b. Semicircular canals

c. Tympanum

d. Incus

Answer: a. Cochlea

19. What is the function of the loop of Henle in the nephron?

a. Filtration

b. Reabsorption

c. Secretion

d. Formation of urine

Answer: b. Reabsorption

20. Which part of the ear is responsible for generating nerve impulses interpreted by the brain for hearing?

a. Retina

b. Cornea

c. Lens

d. Cochlea

Answer: d. Cochlea

21. What does the central nervous system consist of?

a. Brain and spinal cord

b. Somatic and autonomic nervous systems

c. Neurons and glands

d. Kidneys and lungs

Answer: a. Brain and spinal

22. What is the primary role of the somatic nervous system?

a. Involuntary responses

b. Reflexes

c. Relaying information to skeletal muscles

d. Fight-or-flight response

Answer: c. Relaying information to skeletal muscles

23. Which system removes toxins and wastes from the body?

a. Digestive system

b. Respiratory system

c. Excretory system

d. Circulatory system

Answer: c. Excretory system

24. What is the function of the hypothalamus in maintaining homeostasis?

a. Filtration

b. Linking the nervous and endocrine systems

c. Reabsorption

d. Hearing and balance

Answer: b. Linking the nervous and endocrine

25. What type of response is a reflex, and to which nervous system does it belong?

a. Voluntary, autonomic nervous system

b. Involuntary, somatic nervous system

c. Involuntary, autonomic nervous system

d. Voluntary, somatic nervous system

Answer: c. Involuntary, autonomic nervous system