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NAME

LAST

FIRST

INTEGRATIVE BIOLOGY 131 Second Examination, November 7, 1994

- 1. Which opening does not go directly into the nasal cavity?
- a. internal nares
- b. Eustachian tube
- c. opening from the maxillary sinus into the inferior meatus
- d. external nares
- 2. Which one of the following is not part of the nasal septum?
- a. sphenoid
- b. ethmoid
- c. vomer
- d. hyaline cartilage
- 3. What kind of cells in the nasal epithelium produce nasal mucus?
- a. Columnar ciliated cells
- b. goblet cells
- c. squamous cells
- d. cuboidal cells
- 4. The nasolacrimal duct empties directly into what part of the nasal cavity?
- a. inferior meatus
- b. superior meatus
- c. middle meatus
- d. external nares
- 5. The lateral wall of the nasal cavity is formed by the
- a. turbinates from the ethmoid bone
- b. internal conchae
- c. vomer
- d. sphenoid
- 6. What nerve innervates the nasal cavity?
- a. third cranial nerve
- b. second cranial nerve-
- c. fifth cranial nerve
- d. seventh cranial nerve

- 7. How long is the pharynx?
- a. 2 inches
- b. 6 inches
- c. 10 inches
- d. 12 inches
- 8. The oropharynx extends from the to the
- a. hyoid bone -- esophagus
- b. soft palate -- hyoid bone
- c. larynx -- esophagus
- d. base of skull to soft palate
- 9. Which tissue is not found in the wall of the trachea?
- a. skeletal muscle
- b. smooth muscle
- c. hyaline cartilage
- d. pseudostratified columnar ciliated epithelium with goblet cells
- 10. What structure does not enter the lungs at the hilum?
- a. primary bronchi
- b. bronchial artery
- c. pulmonary artery
- d. trachea
- 11. The functional respiratory epithelium in the alveoli is
- a. stratified squamous
- b. simple squamous
- c. cuboidal
- d. stratified columnar
- 12. The potential space between the parietal and visceral pleura is called
- a. pericardial cavity
- b. pleural cavity
- c. thoracic cavity
- d. pulmonary cavity
- 13. Which is not true about surfactant?
- a. produced by goblet cells
- b. covers simple squamous epithelium
- c. found in the alveoli
- d. prevents adhesion of the cells lining the respiratory bronchiole

- 14. The cells normally found in lymph are called
- a. erythrocytes
- b. thrombocytes
- c. leuthrocytes
- d. lymphocytes
- 15. Contraction of the external intercostal muscles
- a. increases the thoracic cavity
- b. decreases the thoracic cavity
- c. decreases alveolar size
- d. decreases the number of dust cells
- 16. Fat is absorbed through the intestinal wall directly into the
- a. blood capillaries
- b. cisterna chyli
- c. lacteals
- d. thoracic duct
- 17. The largest mass of lymphoid tissue in the body is
- a. tonsils
- b. adenoids
- c. Peyer's patches
- d. spleen
- 18. The spleen filters
- a. only lymph
- b. only plasma
- c. only blood
- d. only fat
- 19. Lymph nodes filter
- a. only lymph
- b. only plasma
- c. only blood
- d. only fat
- 20. The thoracic duct carries lymph into the
- a. thoracic aorta
- b. abdominal aorta
- c. junction of the left subclavian and internal jugular vein
- d. junction of the right subclavian and brachiocephalic vein

- 21. The right lymphatic duct does not drain the
- a. right leg
- b. right arm
- c. right head
- d. right neck
- 22. Metastasis means
- a. growth of long bones
- b. stunted growth
- c. spread of cancer cells to other parts of the body
- d. embryonic connective tissue
- 23. What two organs are about 5 by 3 inches long?
- a. lungs and trachea
- b. pharynx and larynx
- c. spleen and heart
- d. spleen and larynx
- 24. The thymus is a mass of lymphatic tissue that
- a. produces monocytes
- b. produces T-lymphocytes
- c. produces dust cells
- d. produces goblet cells
- 25. How does the spleenic capsule differ from the lymph node capsule?
- a. presence of smooth muscle
- b. presence of hyaline cartilage
- c. presence of skeletal muscle
- d. presence of elastic cartilage
- 26. Lymph nodes found along the sternocleidomastoid muscles are called
- a. plasma nodes
- b. inguinal nodes
- c. cervical nodes
- d. axillary nodes
- 27. Masses of lymphatic tissue in the nasopharynx are called
- a. adenoids
- b. Peyer's patches
- c. lingual tonsils
- d. palatine tonsils

- 28. A derivative of the diencephalon includes the
- a. cerebral cortex
- b. basal ganglia
- c. thalamus
- d. superior colliculus
- 29. The neural crest cells form the
- a. posterior horn
- b. anterior horn
- c. dorsal root ganglia
- d. nasal olfactory cells
- 30. Incomplete closure of the head end of the neural tube causes a condition known as
- a. spina bifida
- b. anencephaly
- c. encephalitis
- d. meningitis
- 31. The polio virus attacks the
- a. Meissner's corpuscle
- b. free nerve endings
- c. posterior horn cells
- d. anterior horn cells
- 32. In the disease Herpes Zoster, the virus attacks the dorsal root ganglia cells. What kind of neurons are these?
- a. bipolar
- b. pseudounipolar
- c. multipolar
- d. unipolar
- 33. The substantia nigral cells in the midbrain degenerate in the disease called
- a. myxedema
- b. shingles
- c. Parkinson's
- d. Alzheimer's
- 34. The cerebral cortex is thrown into folds called
- a. gyri
- b. sulci
- c. fissures
- d. plexi

- 35. In the adult brain the central canal of the embryonic neural tube form the
- a. Eustachian tube
- b. canals of Schlemm
- c. ventricles
- d. amygdala
- 36. Fibers connecting the cerebral cortex with the cerebellar cortex are found in the
- a. medulla oblongata
- b. pons
- c. colliculi
- d. thalamus
- 37. Myelin, whether in the CNS or PNS, is formed by
- a. collaterals
- b. nodes of Ranvier
- c. glial cells
- d. initial segments
- 38. One purpose of myelin is to
- a. slow the impulse conduction
- b. speed the impulse conduction and help maintain the axon
- c. speed the impulse conduction and help maintain the epineurium
- d. cover the axon hillock
- 39. Nissl substance, rough endoplasmic reticulum, is not found in the
- a. dendrites
- b. soma or perikaryon
- c. axons
- d. cell body
- 40. Microtubules and neurofilaments play a role in
- a. forming the nucleus
- b. transporting substances in the axon
- c. forming the neurilemma
- d. forming Nissl
- 41. Stimulation of the parasympathetic nervous system cause the iris to
- a. dilate
- b. relax
- c. constrict
- d. none of the above

- 42. Astrocytes, a type of glial cell,
- a. form myelin
- b. form neurons in the embryo
- c. become phagocytic after injury to the CNS
- d. are a type of microglia
- 43. Some nerve cells can divide after birth. They might be found in the
- a. nasal epithelium
- b. cerebral cortex
- c. spinal cord
- d. conus medullaris
- 44. The visceral nervous system does not supply
- a. smooth muscle
- b. cardiac muscle
- c. skeletal muscle
- d. glands
- 45. Lissauer's fasciculus carries what sensory modality?
- a. pain
- b. touch
- c. kinesthesis
- d. pressure
- 46. Cerebrospinal fluid in the central nervous system flows in the
- a. subdural space
- b. subarachnoid space
- c. subpial space
- d. subterminal space
- 47. Most neurons in the CNS are
- a. motor
- b. sensory
- c. interneurons
- d. intercolated neurons
- 48. The pineal gland
- a. is part of the mesencephalon
- b. produces melatonin to inhibit the gonads
- c. produces serotonin to stimulate the mesencephalon
- d. is part of the telencephalon

- 49. The brachial and lumbosacral plexi supplying the extremities consist only of
- a. anterior rami of spinal nerves
- b. posterior rami of spinal nerves
- c. anterior roots of spinal nerves
- d. posterior roots of spinal nerves
- 50. The median nerve innervates the
- a. posterior forearm
- b. only the thumb
- c. only the little finger
- d. anterior forearm
- 51. Specific fiber tracts in the white matter of the cord arranged according to origin and destination are called
- a. funiculi
- b. fasciculi
- c. visceral fibers
- d. commissures
- 52. A sensory relay station to the cerebral cortex is called the
- a. hypothalamus
- b. thalamus
- c. epithalamus
- d. cerebral peduncle
- 53. The inferior colliculus is part of the ____pathway
- a. visual
- b. olfactory
- c. auditory
- d. proprioceptive
- 54. The part of your brain which regulates your temperature is called the
- a. thalamus
- b. epithalamus
- c. hypothalamus
- d. hippocampus
- 55. The III cranial nerve serves to
- a. assist you in tasting your cheese cake
- b. roll your eyes, raise your eyelid and constrict your pupil
- c. feel dust in your eye
- d. hear

- 56. The masses of the nerve cells in the base of the cerebral hemispheres
- a. are called substantia nigra and secrete dopamine
- b. control thirst
- c. control pituitary hormones
- d. are called the basal ganglia and influence motor functions
- 57. The 7th cranial nerve
- a. innervates your extraocular eye muscles
- b. supplies your skin on the cheek with sensory innervation
- c. allows you to wrinkle your forehead and smile
- d. innervates your tongue muscles
- 58. The 8th cranial nerve
- a. arises from the forebrain
- b. arises from the midbrain
- c. is concerned with vision and taste
- d. is concerned with hearing and balance
- 59. The 2nd cranial nerve
- a. arises from the diencephalon
- b. stimulates a muscle that moves the eyeball
- c. causes tears to flow
- d. innervates the sternocleidomastoid muscle
- 60. The 10th cranial nerve
- a. innervates the heart
- b. innervates the tongue muscles
- c. innervates the nasal mucosa
- d. innervates the oral mucosa

Knowing anatomy today provides the foundation for embryology, physiology, biochemistry, human biodynamics, bioengineering, pathology, pharmacology, and you tomorrow.