

Answer Key

Integrative Biology 131 Fall 1996 Second Midterm M. Diamond

Part I. Choose the correct answer

1. Which of the following is not a group of superficial lymph nodes?
 - a. tracheobronchial
 - b. inguinal
 - c. axillary
 - d. cervical

2. Which is not correct for a lymph node?
 - a. afferent vessels enter the convex surface of the node
 - b. efferent vessels leave at the concave surface of the node
 - c. lymph nodes produce lymphocytes
 - d. blood flows through lymph nodes as it does through spleen

3. Metastasized cancer cells enter lymph vessels and
 - a. enter the blood vascular system immediately
 - b. then always lie dormant in a lymph node
 - c. can continue to divide in a lymph node
 - d. cannot ever be palpated in a lymph node

4. The largest mass of lymphatic tissue in the body is the
 - a. thymus
 - b. tonsil
 - c. Peyer's patch
 - d. spleen

5. The simplest lymphoid organs are the tonsils which are not located
 - a. on the posterior surface of the tongue (lingual)
 - b. inferior to the posterior edge of the palate (palatine)
 - c. on the superior surface of the larynx (laryngeal)
 - d. in the nasopharynx (adenoids)

6. The thoracic duct empties into the
 - a. right subclavian and common carotid arteries
 - b. left subclavian and internal jugular veins
 - c. left common carotid and left jugular vein
 - d. right subclavian and internal jugular veins

7. Which function is not appropriate for lymphatic vessels?
 - a. pick up tissue fluid and return it to the venous system
 - b. retrieve blood proteins and return to venous system
 - c. lead to one lymph node before lymph reaches venous system
 - d. transport RBC to venous system

8. Large fat molecules are absorbed primarily into
- veins called lacteals in the intestinal villi
 - blind lymphatic capillaries in the intestinal villi
 - small cuboidal lined vessels in the intestinal villi
 - arterioles
9. Lymphoid organs become populated by lymphocytes, which originally arise from
- spleen
 - thymus
 - red bone marrow or hemopoietic tissue
 - tonsil
10. Which bone is not part of the nasal cavity?
- maxillary
 - ethmoid
 - sphenoid
 - zygomatic
11. The paranasal sinuses do not include the
- ethmoid
 - sphenoid
 - mastoid
 - maxillary
12. The pharynx connects the nasal cavity and mouth superiorly to the larynx and _____ inferiorly.
- esophagus
 - trachea
 - Eustachian tube
 - epiglottis
13. The pharyngeal tonsil (adenoid) lies in the nasal pharynx and can protect infections from entering the middle ear through the
- internal nares
 - external nares
 - Eustachian tube
 - uvula
14. During breathing, the epiglottis
- forms a lid over the larynx
 - protects food from entering the pharynx
 - does not form a lid over the larynx
 - comes in contact with the cricoid

15. The thyroid cartilage is obvious externally as the
- a. Adam's apple
 - b. George's pear
 - c. Henry's orange
 - d. Jim's peach
16. What structure is not involved in modifying the voice?
- a. true vocal cord
 - b. maxillary sinus
 - c. glottis
 - d. false vocal cord
17. At the level of the _____, hyaline cartilage is no longer part of the respiratory tract.
- a. trachea
 - b. cricoid
 - c. bronchi
 - d. bronchiole
18. _____ is present in the wall of the respiratory tube to regulate the amount of air coming in and out.
- a. cilia
 - b. smooth muscle
 - c. a venous plexus
 - d. mucus
19. What structure is not part of the respiratory "membrane" where gas is present on one side and blood on the other?
- a. alveoli
 - b. basement membrane
 - c. reticular fibers
 - d. capillary endothelium
20. The macrophages at the level of the alveoli are called "dust" cells and function to
- a. collect excess mucus
 - b. secrete surfactant
 - c. lie between the alveoli and capillary epithelium
 - d. engulf foreign material that the cilia have not removed
21. With normal, quiet expiration which does occur
- a. recoil of elastic fibers in the alveoli
 - b. contraction of external intercostals
 - c. increase anterior-posterior diameter of thorax
 - d. contraction of diaphragm

22. Pleural fluid is secreted by the pleura which
- cover the primary bronchi
 - only cover the lungs
 - line the thoracic cavity (parietal) and cover the lungs (visceral)
 - are made of simple cuboidal cells
23. Alveoli are covered with a substance called surfactant which
- reduces surface tension and helps alveoli remain open
 - feeds the macrophages in the alveoli
 - is formed by the capillary endothelial cells
 - lies beneath the alveoli epithelium
24. Tears flowing in the nasolacrimal duct reach the nasal cavity through the
- middle meatus
 - inferior meatus
 - superior meatus
 - none of the above
25. A rich plexus of veins beneath the nasal epithelium serves to
- help clean the air coming into the nasal cavity
 - provide hormones for preparing air for respiration
 - warm the air that flows across the mucosal surface
 - attract pollutants entering the nasal cavity
26. A cataract is caused by
- increased intraocular pressure
 - blocked canals of Schlemm
 - cloudy lens due to protein changes
 - too much aqueous humor
27. What structure is not part of the nasal septum?
- ethmoid
 - sphenoid
 - maxillary
 - vomer
28. Epithelium lining the oral pharynx is
- pseudostratified columnar ciliated epithelium with goblet cells
 - stratified squamous epithelium
 - simple squamous epithelium
 - simple columnar epithelium

29. The vocal cords are covered with
- pseudostratified columnar ciliated epithelium with goblet cells
 - stratified squamous epithelium
 - simple squamous epithelium
 - stratified cuboidal epithelium
30. The vocal cords are posterior to the
- thyroid cartilage
 - cricoid cartilage
 - epiglottis
 - none of the above
31. The purpose of the turbinate bony projections of the ethmoid bone is to
- lighten the skull
 - improve the appearance of the nasal cavity
 - increase the surface area of the nasal cavity
 - improve the sense of smell
32. The cellular organelle that continually renews the protein in the membranes and cytoplasm of the neuron is called
- Golgi
 - neurofibrils
 - Nissl substance or rough endoplasmic reticulum
 - chromatin
33. During chromatolysis, which of these is not correct?
- Nissl moves to the periphery of the soma
 - The nucleus moves to the periphery
 - The soma swells with an increase in fluid
 - The cell becomes more efficient
34. Dendrites are extensions of the membrane around the perikaryon. Which of these are correct?
- dendrites are covered in myelin to increase nerve conduction
 - dendrites have a node of Ranvier
 - dendrites liberate neurotransmitter from the presynaptic membrane
 - dendrites are receptor sites providing a surface for signals from other neurons
35. Glia cells
- do not divide
 - are only found in the PNS
 - are the structural and metabolic support cell for the neuron
 - have no nucleus

36. Clusters of nerve cell bodies outside the CNS are called
- nuclei
 - fasiculi
 - Nissl
 - ganglia
37. Clusters of nerve cell bodies inside the CNS are usually called
- nuclei
 - fasiculi
 - Nissl
 - ganglia
38. Types of synapses do not include
- axodendritic
 - axoaxonic
 - axosomatic
 - axoganglionic
39. Most nerve cells in the CNS are
- motor neurons
 - sensory neurons
 - pseudoneurons
 - interneurons
40. A pseudounipolar cell
- is not found ion the dorsal root ganglia
 - has both an axon and dendrites
 - has myelin on both the peripheral and central process
 - none of the above
41. Myelin in the PNS is formed by
- oligodendrocytes, a type of glial cell from the neural tube
 - astrocytes
 - nodes of Ranvier
 - Schwann cells, a type of glial cell from neural crest cells
42. Multiple sclerosis is an autoimmune discasc and the myclin sheath slowly disappears.
Myelin in the CNS is formed by
- oligodendrocytes
 - astrocytes
 - nodes of Ranvier
 - Schwann cells, a type of glial cells from the neural crest

43. The diencephalon gives rise to the
- basal ganglia
 - hypothalamus
 - superior colliculus
 - substantial nigra
44. The medulla oblongata is no responsible for
- regulating the heart beat
 - regulating breathing
 - movement of the tongue
 - Parkinson's disease
45. The telencephalon does not give risc to the
- cerebral hemispheres
 - basal ganglia
 - hippocampus
 - cerebral peduncles
46. Lissuaer's fasciculus is part of the
- midbrain
 - thalamus
 - pain pathway in the spinal cord
 - pineal
47. A major hormone from the pineal gland from the diecephalon is
- dopamine
 - acetylcholine
 - melatonin
 - GABA
48. Cerebrospinal fluid in the III ventricle flows into
- lateral ventricle
 - aqueduct
 - subarchnoid space
 - fourth ventricle
49. Lack of pain in a tooth could be due to blockage of a branch of what nerve?
- III
 - IV
 - V
 - VI

50. Cerebrospinal fluid is formed by the choroid plexus in the lateral, III and IV ventricles. How does CSF get back into the venous system?
- into the jugular vein
 - into the large venous sinus between the folds of the dura mater in the longitudinal fissure
 - into the superior vena cava
 - none of the above

Part II Mark A = True or B = False

- F 51. The dural sac at the end of the conus medullaris ends at L1.
- T 52. The pial-glia protective membrane surrounds the whole CNS. Astrocytes are the glia involved in forming part of the membrane.
- T 53. The cerebral is only about 2-4.5 mm thick and yet it has the capacity to think about sending humans to Mars.
- F 54. The primary motor cortex, allowing you to write your answers, is located in the post central gyrus in the frontal lobe.
- F 55. Visual and visual association areas are found in the parietal lobe.
- F 56. The corticospinal tract crosses to opposite side in the midbrain
- F 57. The largest part of the sensory homunculus includes the fingertips and the toes.
- F 58. Broca's area (motor speech) is in the inferior temporal lobe.
- F 59. The most complicated area of the cortex, dealing with analytical thinking, decision making, initiative, etc is in the inferior parietal lobe.
- T 60. The sexually dimorphic nucleus is in the hypothalamus.

I am still wishing that you all get your A grades. This time?
 I am still wishing that you all get your A grades.
 Repetition helps the learning process.