

1) Which of the following represents the exocrine portion of the pancreas?

Select one:

- a. Islets of Langerhans
- b. Acinus cells
- c. Alpha cells
- d. Beta cells
- e. Delta cells

2) Failure of the body to distinguish between non-self and self-antigens is called _____ ?

Select one:

- a. Allergic reaction
- b. Autoimmune reaction
- c. Immunodeficiency
- d. Diapedesis
- e. Poisoning

Answer: B

3) Blood sinusoids are characterized by _____ ?

Select one:

- a. Regular lumen
- b. Fenestrated endothelium
- c. Rapid blood flow
- d. Thick basement membrane
- e. Presence of smooth muscles



Answer: B

4) The radial nerve is a major peripheral nerve of the upper limb, it includes all of the following EXCEPT?

Select one:

- a. Motor axons
- b. Perineurium
- c. Schwann cells
- d. Microglia
- e. Sensory axons

Answer: D

5) Motor neuron perikarya are found in _____ ?

Select one:

- a. Ventral horn of gray matter
- b. Peripheral nerves
- c. Skeletal muscle fiber
- d. Dorsal root ganglia
- e. Dorsal root of gray matter

Answer: A

6) One of the following is not a type of blood capillaries?

Select one:

- a. Sinusoidal capillaries
- b. Lymphatic capillaries
- c. Fenestrated capillaries
- d. Continuous capillaries
- e. Somatic capillaries



Answer: B

7) The following blood vessel contains longitudinal bundles of smooth muscle fibers in the tunica adventitia?

Select one:

- a. Inferior vena cava
- b. Thoracic duct
- c. Basilar artery
- d. Coronary artery
- e. Medium sized vein

Answer: A

8) Each of the following statements concerning B lymphocytes is true EXCEPT?

Select one:

- a. They can differentiate into plasma cells
- b. They are derived from bone marrow
- c. They can form lymphatic nodule
- d. They are the cause of graft rejection
- e. They are responsible for humeral immune response

Answer: D

9) One of the following is INCORRECT regarding sensory and sympathetic ganglia?

Select one:

- a. Dorsal root ganglia cell bodies have purely trophic function
- b. Sympathetic ganglia have multipolar neurons
- c. Sympathetic ganglia lack capsule in certain locations
- d. Dorsal root ganglia carry afferent neurons
- e. Sensory ganglia usually have unmyelinated nerve fibers



Answer: E

10) A bundle of axons in the peripheral nervous system is called a ____ ?

Select one:

- a. Nucleus
- b. Ganglion
- c. Nerve
- d. Column
- e. Tract or commissure

Answer: C

11) Blood lymphocytes enter the lymph nodes through ____ ?

Select one:

- a. Medullary arterioles
- b. Cortical venules
- c. Metarterioles
- d. Blood capillaries
- e. Post capillary venules

Answer: E

12) Choose the INCORRECT statements from the followings?

Select one:

- a. The tunica intima of any arterial wall is regulated by sympathetic innervation and by many hormones
- b. Baroreceptors are sensitive to changes in the level of carbon dioxide in the blood
- c. Muscular arteries have prominent internal elastic lamina
- d. Precapillary sphincters regulate blood flow to the true capillaries
- e. Standing for long times would increase the chances of developing varicose vein



Answer: B

13) The node of Ranvier_____ ?

Select one:

- a. Increase the efficiency of nerve conduction
- b. Occurs only in the central nervous system
- c. Occurs only in the peripheral nervous system
- d. Represent the midpoints of myelination segments
- 9. Are completely covered by myelin

Answer: A

14) Which of the following is INCORRECTLY matched concerning the axoplasmic transport system (ATS)?

Select one:

- a. Anterograde ATS syphilis in the dorsal columns
- b. Slow ATS growth and regeneration
- 0. Fast ATS bidirectional
- d. Retrograde ATS fast
- e. Retrograde ATS toxins and viruses

Answer: A

15) What does PALS stand for?

Select one:

- a. Papillary layer sinus
- b. Periarteriolar lymphatic sheath
- c. Peye'r's lymphatic sheath
- d. Parenchymal lymphatic sheath
- e. Peripheral lymphatic sinus



Answer: B

16) Regarding innate immune system, all of the following are true EXCEPT?

Select one:

- a. Includes antibodies formation.
- b. Is formed of external and internal lines of defense.
- c. Includes antimicrobial proteins and inflammatory response.
- d. Natural killer lymphocytes are one of its components.
- e. Doesn't form memory for second immune response.

Answer: A

17) Myelin is absent from all of the following structures EXCEPT?

Select one:

- a. Dendrites
- b. Axon hillock
- c. Node of Ranvier
- d. Terminal ends or synapses
- e. Internodal segment

Answer: E

18) The cells that develop immunocompetence in the thymus are _____7

Select one:

- a. B lymphocytes
- b. Natural killer cells
- c. T lymphocytes
- d. Epithelial reticular cells
- e. Macrophages

Answer: C

19) CD8+ is a marker of ?

Select one:

- a. B lymphocytes
- b. Helper T lymphocytes
- c. Natural killer cells
- d. Cytotoxic T lymphocytes
- e. Plasma cells



Answer: D

20) All the following statements are true of cardiac muscle EXCEPT?

Select one:

- a. T—tubules lie at the junction of A and I bands
- b. intercellular junctions include desmosomes
- c. intercellular junctions include gap junctions
- d. intercellular junctions include zonula adherens
- e. muscle fibres have sarcotubules

Answer: A

21) Which of the followings is INCORRECTLY matched?

Select one:

- a. Epithelial reticular cells ///// Secrete thymic hormones
- b. Hassall's corpuscles ///// Acidophilic structures in the thymic medulla
- c. Billroth cords ///// Loose reticular tissue between white pulp and blood sinusoids
- d. Medullary cords ///// aggregations of small lymphocytes forming rounded or oval structures
- E] e. Thymic humoral factor ///// control the multiplication of both helper and cytotoxic T -cells

Answer: D

22) Which is TRUE of unmyelinated fibers of the PNS?

Select one:

- a. They are not associated with Schwann cells
- b. They have more node of Ranvier than myelinated fibers
- c. They are enclosed in Schwann cells
- d. They have one axon per one Schwann cell
- e. They are covered by special cells called astrocytes



Answer: C

23) All of the followings are characteristics of type II Pneumocytes EXCEPT?

Select one:

- a. Carry ACE2 receptors on their cell surface
- b. Secrete surfactant
- c. Phagocytose foreign particles in the alveoli
- d. Fewer in number than type I Pneumocytes
- e. Divide to produce both type I and type II Pneumocytes

Answer: C

24) Supporting cells of the nervous tissue are nonconducting cells that are in intimate physical contact with neurons, which of the following forms the BEST MATCH?

Select one:

- a. Microglia Ectoderm neuronal tube .
- b. Satellite cells Provide electrical insulation in CNS
- c. Fibrous astrocytes Gray matter
- d. Fibrous astrocytes Macrogliia
- e. Oligodendrocytes Neural macrophages

Answer: D

25) _____ the structure that absorb lipids in the intestine?

Select one:

- a. Lymphatic duct
- b. Lacteal
- c. Lymphatic trunk
- d. Vein
- e. Collecting vessel



Answer: B

26) Foam cells are ____?

Select one:

- a. Modified smooth muscles in tunica media of arterioles
- b. Endothelial cells damaged by atherosclerotic lesions
- c. Fibroblasts in tunica adventitia of arteries to prevent over distention
- d. Macrophages ingesting lipids in the sub-endothelium of arteries
- e. Mesothelial cells lining of the blood sinusoids

Answer: D

27) Which of the following INCORRECTLY paired?

Select one:

- a. White muscle fibres found in extraocular muscles
- b. Red muscle fibres thin
- c. White muscle fibre contract fast
- d. Red muscle fibres tire slowly
- e. White muscle fibres more mitochondria

Answer: E

28) Which of the followings is INCORRECTLY matched?

Select one:

- 3. Superior concha ///// Pseudostratified columnar with chemoreceptors
- b. Trachea ///// C-shaped hyaline cartilage
- c. Inferior concha ///// Pseudostratified columnar ciliated with goblet cells
- d. Bronchus ///// Musculosa of spiral layers of smooth muscles
- e. Bronchioles ///// Mucosa associated lymphoid follicles



Answer: E

29) Which of the following CNS neuroglial cells is called neural macrophages?

Select one:

- a. Astrocytes
- b. Microglia
- c. Ependyma
- d. Oligodendrocytes
- e. Schwann cells

Answer: B

30) Fenestrated capillaries are common in the following sites EXCEPT?

Select one:

- a. Intestine
- b. Brain
- c. Pancreas
- d. Kidney
- e. Endocrine glands

Answer: B

31) Concerning the tongue, one is TRUE?

Select one:

- a. Lingual tonsil is on the anterior 1/3
- b. Covered with fully keratinized stratified squamous epithelium
- c. Lingual papillae are on the posterior 1/3
- d. Lingual glands are embedded in the muscles of the ventral surface
- e. The inside of the tongue contains bundles of smooth muscles



Answer:

32) Myofibrils are best described as _____ ?

Select one:

- a. Multinucleated cellular units
- b. Bundles of contractile filaments
- c. Motor axons
- d. Fascicle
- e. Long protein molecules

Answer: B

33) One of the following is INCORRECT regarding the perikaryon of the neurons?

Select one:

- a. They can receive stimuli
- b. Their nuclei move to the periphery after injury
- c. They contain large well-developed Golgi bodies
- d. They are associated with Schwann cells in PNS
- e. They swell after injury

Answer: D

34) Regarding the Glomus which statement is CORRECT?

Select one:

- a. Type of arteriovenous anastomosis
- b. Richly innervated smooth muscle
- c. Sensitive to changes in blood O₂ and CO₂
- d. Found in the tunica media of the carotid sinuses
- e. Macrophages filled with lipid droplets



Answer: C

35) Which of the following is CORRECT regarding the lingual tonsil?

Select one:

- a. Present at the body of the tongue
- b. Covered with keratinized stratified squamous epithelium
- c. Anterior to sulcus terminalis
- d. Lymphatic tissue is formed of lymphatic nodules and diffuse lymphatic tissue
- e. Recurrent inflammation is very common

Answer: D

36) Bronchioles differ from bronchi in all of the following aspects EXCEPT?

Select one:

- a. lack of hyaline cartilage
- b. Presence of smooth muscles
- c. Type of lining epithelium
- d. Absence of submucosal glands
- e. Presence of non- mucous, non- ciliated secretory Clara cells

Answer: B

37) Thymus dependent zone of spleen is present _____?

Select one:

- a. Around central arteriole of white pulp
- b. Germinal center of white pulp
- c. Marginal zone of white pulp
- d. Splenic cords
- e. Around penciller arteriole of red pulp



Answer: A

38) Which of the following is found in the white matter of central nervous system?

Select one:

- a. Ganglion
- b. Microglia
- c. Protoplasmic astrocyte
- cl. Schwann cell
- e. Nuclei

Answer: B

39) The peristalsis movement of the gastrointestinal tract is carried out by which plexus?

Select one:

- a. Meissner's plexus
- b. Brachial plexus
- c. Auerbach's plexus
- d. Lumbar plexus
- e. Cervical plexus

Answer: C

40) Which pairing is INCORRECT?

Select one:

- a. Beta cells / Insulin
- b. F cells / Pancreatic polypeptide
- 0. Alpha cells / Glucagon
- d. Parotid / Saliva
- e. Pancreatic acinar cells / Somatostatin



41) Choose the INCORRECT statement from the followings?

Select one:

- a. Elastin is the most abundant element in the media of the aorta
- b. Vasa vasorum are blood vessels that supply the wall of the blood vessels
- c. Pericytes are commonly found in the wall of the capillaries
- d. Up to 65% of the body blood supply found in veins
- e. Metarterioles drain the capillary bed

Answer: E

42) Which of the followings are CORRECTLY matched?

Select one:

- a. Sustentacular cells ///// Chemoreceptors of smell of sensation
- b. Type II pneumocytes ///// Involved in gas exchange
- c. Clara cells ///// Elimination of inhaled gaseous toxins
- d. Olfactory neurons ///// Can divide and act as stem cells
- e. Type I Pneumocytes ///// Secrete surfactant to prevent lung collapse

Answer: C

43) One of the following is INCORRECT regarding astrocytes?

Select one:

- a. They are macroglial cells of the CNS E
- b. They are the scar forming cells of the CNS
- c. They have a perivascular foot processes
- d. The protoplasmic astrocytes have a rounded some with thick processes
- e. The fibrous astrocytes are present within the autonomic ganglia



Answer: E

44) The serous secretory cells may characterize by _____ ?

Select one:

- a. Flattened basal nuclei
- b. Vacuolated apical cytoplasm a
- c. May form demilunes
- d. Lack intercellular canaliculi
- e. Presence of abundant myoepithelial cells

45) The esophagus is characterized by all of the following EXCEPT?

Select one:

- a. The submucosa contains mucous secreting glands
- b. The musculosa of the upper third is striated voluntary
- c. The musculosa of the lower third is smooth muscle
- d. The lining epithelium is simple squamous non-keratinized
- e. The adventitia connects the esophagus with surrounding organs

Answer: D

46) Choose the INCORRECT statements from the followings?

Select one:

- a. Intrapulmonary bronchi have cartilage plates in their walls a
- b. Bowman's glands present in the lamina propria of respiratory epithelium
- c. Clara cells are dome-shaped cells secrete surfactant- like substance
- d. Alveolar macrophages are developed from blood monocytes
- e. The epiglottis is an elastic cartilage flap that prevent aspiration of food into the lungs



Answer: B

47) Which of the followings is INCORRECTELY matched?

Select one:

- a. Palatine tonsils ///// covered with non-keratinized stratified squamous epithelium
- b. Epithelial reticular cells //// secrete thymic hormones and thymic factor
- c. Paracortex //// thymus dependent zone of spleen
- d. Cortical lymph sinuses ///// lined with endothelial cells and macrophage
- e. Pharyngeal tonsils ///// covered with pseudostratified columnar ciliated goblet cells epithelium

Answer: C

48) Choose the INCORRECT match from the followings?

Select one:

- a. Bone marrow ///// Primary lymphoid organ
- b. Stave cells ///// Medullary sinuses of lymph nodes
- c. Memory lymphocytes ///// Adaptive immune system
- d. Thymocytes ///// Immature T lymphocytes
- e. Mantel zone ///// Secondary lymphatic follicle

Answer: B

49) One of the followings is INCORRECTLY matched?

Select one:

- a. Bipolar neurons cochlear nerves C
- b. Unipolar neurons afferent neurons 4
- c. Multipolar neurons vestibular nerve
- d. Bipolar neurons one axon
- e. Intermediate neurons present in the CNS



Answer: C

50) The histological structure that will express CD8+ surface marker when Immunohistochemically stained is _____ ?

Select one:

- a. Splenic cords
- b. Outer cortex of lymph nodes
- c. Splenic red pulp
- d. Paracortex of lymph nodes
- e. Bone marrow

Answer: D

51) A muscle fascicle is a bundle of _____?

Select one:

- a. Myofibrils
- b. Myofibres
- c. Myofilaments
- d. Fascia
- e. Epimysium

Answer: B

52) Unique feature of the olfactory epithelium is the presence of _____?

Select one:

- a. Goblet cells
- b. Cells with stereocilia
- c. Clara cells
- d. Neurons that are replaced by cell division when worn out or damaged
- e. Mucus secreting glands in its lamina propria



Answer: D

53) Regarding the lymphatic capillaries all of the following are correct EXCEPT?

Select one:

- a. Begin with blind end
- b. Are larger and more permeable than blood capillaries
- c. The basement membrane splits to enclose pericytes
- d. Have interrupted basal lamina
- e. Have gaps between endothelial cells

Answer: C

54) One of the following is CORRECTLY paired?

Select one:

- a. Dendrites-----tapered
- b. Axon hillock---- Nissl body
- c. Dendrons-----do not contain neurofibrils
- d. Axon----- length is constant
- e. Dendrons-----conduct impulses outwards the cell body

Answer: A

55) Ultrastructurally. the type of junction within intercalated disc, which rivets to prevent the cells from pulling apart?

Select one:

- a. Zonula adherents
- b. Desmosomes
- c. Gap junctions
- d. Nexus
- e. fasclae adherents



Answer: B

56) Choose the CORRECT match?

Select one:

- a. Arteriovenous shunt ///// direct connection between arteries and veins
- b. Somatic capillaries ///// have the highest permeability
- c. Elastic arteries ///// obscure internal elastic lamina
- d. Sinusoidal capillaries ///// continuous basement membrane
- D e. Umbilical artery ///// clear external elastic lamina

Answer: A

57) One of the following is CORRECT about sarcoplasmic reticulum of skeletal muscle?

Select one:

- a. It forms triads at the level of Z line
- b. It forms diads at the level of junction between A and I bands
- c. The T tubules usually absent
- d. It has sarcotubules
- e. The T tubules situated at the level of 2 line

Answer: E

58) One of the followings is INCORRECTLY matched?

Select one:

- a. Type A peripheral neuron very thin
- b. Type A peripheral neuron skeletal muscles
- c. Type C peripheral neuron autonomic fibres
- d. Type B peripheral neuron myelinated
- e. Type B peripheral neuron preganglionic autonomic fibres



Answer: A

59) One of the following is INCORRECT about the sarcomere?

Select one:

- a. I-band - actin filaments
- b. A-band - myosin filaments with actin filaments
- c. H-band - zone of myosin and actin filaments
- d. M-line - connections between myosin filaments
- e. Z-line - zone of apposition of actin filaments belonging to two neighbouring sarcomeres

Answer: C

60) The largest cell bodies in the dorsal (posterior) horn of the spinal cord belong _____?

Select one:

- a. Astrocytes
- b. Primary sensory neurons
- c. Oligodendrocytes
- d. Lower motor neurons
- e. Secondary motor neurons

Answer: B

