

For each of the following multiple choice questions, select the **BEST** answer.

1. What type of epithelial cell is most likely to contain abundant RER, well-developed supranuclear Golgi and zymogen granules?
 - A. Secretory
 - B. Mucous-secreting
 - C. Steroid-producing
 - D. Absorptive
 - E. Ciliated

2. Which type of epithelium has superficial cells adapted to stretching and contracting?
 - A. Stratified squamous
 - B. Stratified columnar
 - C. Stratified squamous keratinizing
 - D. Simple squamous
 - E. Transitional

3. The epidermal cells that are most closely associated with nerve endings are called
 - A. Merkel cells.
 - B. Langerhans cells.
 - C. melanocytes.
 - D. Granstein cells.
 - E. None of the above

4. Which of the following structures is likely to contain the most vasa vasorum?
 - A. Muscular artery
 - B. Aorta
 - C. Muscular venule
 - D. Large vein
 - E. Blood capillary

5. What is the function of the elastic rebound of conducting arteries?
 - A. It helps to maintain arterial blood pressure.
 - B. It provided nutrients to the adventitia.
 - C. It reopens their valves.
 - D. It maintains their shape.
 - E. It prevents red blood cells from sticking to the intima.

6. Which distinguishes endothelia from mesothelia?
 - A. Desmosomes
 - B. Tight junctions
 - C. Cytokeratins
 - D. Microvilli
 - E. None of the above

7. What connective tissue cell contains metachromatic granules and is typically found around blood vessels?
- A. Macrophage
 - B. Fibroblast
 - C. Plasma cell
 - D. Adipocyte
 - E. Mast cell
8. Which of the following substances bind eosin in conventional paraffin-sectioned histological preparations?
- A. Collagen
 - B. RNA
 - C. DNA
 - D. Sulfated glycosaminoglycans
 - E. Neutral lipids
9. Which of the following cells derived from the bone marrow can trap and present antigens to immunologically competent cells?
- A. Melanocytes
 - B. Merkel cells
 - C. Sebaceous cells
 - D. Granstein cells
 - E. Langerhans cells
10. The agents in which of the following procedures are intended to stabilize tissue structure by coagulating proteins and promoting cross-linking?
- A. Fixation
 - B. Clearing
 - C. Mounting
 - D. Dehydration
 - E. Staining
11. What type of connective tissue (CT) forms most organ capsules and can resist tensile stress from all directions?
- A. Dense irregular CT
 - B. Adipose CT
 - C. Reticular CT
 - D. Dense regular CT
 - E. Loose CT
12. The presence of which of the following is a **unique** feature of cardiac muscle fibers?
- A. Intercalated discs
 - B. Gap junctions
 - C. Myofibrils
 - D. Satellite cells
 - E. White (Type IIB) fibers

13. In the embryo, epithelial tissues arise from
- A. ectoderm.
 - B. mesoderm.
 - C. endoderm.
 - D. all three germ layers.
 - E. only A and C.
14. Which of the following is most likely to contain longitudinal smooth muscle in its tunica adventitia?
- A. Muscular venule
 - B. Large vein
 - C. Blood capillary
 - D. Muscular artery
 - E. Aorta
15. When one adult sheet-like epithelium is replaced by another adult sheet-like epithelium, the process is called
- A. atrophy.
 - B. hyperplasia.
 - C. metaplasia.
 - D. anaplasia.
 - E. hypertrophy.
16. Which of the following is **INCORRECT** regarding the Duchene type of muscular dystrophy?
- A. It is due to an intrinsic defect in the muscle.
 - B. It is inherited as a sex-linked recessive.
 - C. It is seen more frequently in males than in females.
 - D. It is characterized by progressive muscular weakness and wasting.
 - E. It usually begins after the age of 40.
17. Which of the following is **NOT** characteristic of smooth muscle?
- A. Autonomic nervous system innervation
 - B. Heterochromatic nuclei
 - C. Association with connective tissue
 - D. Indistinct boundaries between adjacent cells at light microscope level
 - E. Presence in the wall of many blood vessels
18. Reticular fibers are predominantly composed of what collagen type?
- A. I
 - B. II
 - C. III
 - D. IV
 - E. V

19. In a third-degree burn,
- A. the skin can regenerate all layers with ease.
 - B. the damage extends only to the dermo-epidermal junction.
 - C. the wound is replaced by cells from the stratum basale.
 - D. a skin graft usually is required to repair the damage.
 - E. the stratum basale remains intact.
20. Select the **INCORRECT** statement about epithelial tissue.
- A. It has abundant intercellular material.
 - B. It may contain more than one cell type.
 - C. After 45 years of age, most tumors arise from epithelium.
 - D. It is usually avascular.
 - E. It usually exhibits polarity.
21. What is the average diameter of a blood capillary?
- A. 0.8 to 1 micron
 - B. 8 to 10 microns
 - C. 80 to 100 microns
 - D. 0.8 to 1 millimeter
 - E. 8 to 10 millimeters
22. Which of the following components of a muscular artery changes the least with age?
- A. Tunica adventitia
 - B. Internal elastic lamina
 - C. External elastic lamina
 - D. Tunica media
 - E. Tunica intima
23. Which of the following is the predominant basic tissue type in the tunica media?
- A. Epithelium
 - B. Connective tissue
 - C. Nerve
 - D. Muscle