

Kierszenbaum: Histology and Cell Biology, 3rd Edition

Test Bank

Chapter 1: Epithelium

MULTIPLE CHOICE

1. The type of epithelium found lining small capillaries where it modulates diffusion is
 - A. Simple columnar
 - B. Simple cuboidal
 - C. Simple squamous
 - D. Stratified cuboidal
 - E. Stratified squamous

Ans: C. Simple squamous

2. The type of epithelium that is associated with distensible organs such as the urinary bladder is
 - A. Pseudostratified columnar
 - B. Simple cuboidal
 - C. Stratified squamous
 - D. Transitional
 - E. None of the above

Ans: D. Transitional

3. Epithelia that play a protective function and line the esophagus are
 - A. Pseudostratified columnar
 - B. Simple columnar
 - C. Simple squamous
 - D. Stratified columnar
 - E. Stratified squamous

Ans: E. Stratified squamous

4. The surface of the ovaries contains which type of epithelium
 - A. Pseudostratified columnar
 - B. Simple columnar
 - C. Simple cuboidal
 - D. Simple squamous
 - E. Stratified squamous

Ans: C. Stratified squamous

5. The epithelial specializations most likely to be found in absorptive epithelia are
 - A. Cilia
 - B. Flagella
 - C. Microtubules

- D. Microvilli
- E. Stereocilia

Ans: D. Microvilli

6. The apical surface modifications of the cells lining the small intestine contain which of the following proteins?
- A. Actin
 - B. Claudin
 - C. Elastin
 - D. Myosin
 - E. Occludin

Ans: A. Actin

7. Identify the INCORRECT statement
- A. Basal lamina can be divided into the lamina densa and lamina lucida
 - B. Desmosomes are an effective barrier to the diffusion of substances across an epithelium.
 - C. In pseudostratified epithelia all epithelial cells contact the basement membrane.
 - D. The basal lamina can act as a selective filter between the epithelium and the connective tissue.
 - E. Tight junctions between epithelial cells are an effective barrier to the diffusion of substances across an epithelium.

Ans: B. Desmosomes are an effective barrier to the diffusion of substances across an epithelium.

8. The portion of the junctional complex primarily responsible for restricting the passage of molecules between adjacent epithelial cells is/are composed of
- A. Gap junction
 - B. Hemidesmosomes
 - C. Macula adherens
 - D. Zonula adherens
 - E. Tight junctions

Ans: E. Tight junctions

9. Through which part of a junctional complex can ions freely flow between adjacent cells?
- A. Gap junction
 - B. Hemidesmosomes
 - C. Macula adherens
 - D. Zonula adherens
 - E. Tight junctions

Ans: A. Gap junction

10. Through which part of a junctional complex can ions freely flow between adjacent cells?

- A. Gap junction
- B. Hemidesmosomes
- C. Macula adherens
- D. Zonula adherens
- E. Tight junctions

Ans: A. Gap junction

11. The cell adhesion molecule that binds to both the intracellular cytoskeleton and the extracellular matrix is

- A. Cadherin
- B. Fibronectin
- C. Integrin
- D. Laminin
- E. Selectin

Ans: C. Integrin

12. Which of the following proteins composes the majority of the basal lamina?

- A. Collagen
- B. Fibrin
- C. Fibronectin
- D. Integrin
- E. Laminin

Ans: E. Laminin

13. Maintaining actin filament length occurs through a process called treadmilling. Which of the following proteins severs actin filaments and then caps the severed end, preventing further polymerization?

- A. Cofilin
- B. Gelsolin
- C. Phalloidin
- D. Profilin
- E. Thymosin

Ans: B. Gelsolin

14. Which of the following are important components of axonemes?

- A. Actin
- B. Intermediate filaments
- C. Microfilaments
- D. Microtubules
- E. Myosin

Ans: D. Microtubules

15. Which of the following proteins transports vesicles along neuronal axons?

- A. Actin
- B. Calmodulin
- C. Kinesin
- D. Myosin I
- E. Myosin II

Ans: C. Kinesin

16. What supportive structures are the most stable component of the cytoskeleton?

- A. Actin filaments
- B. Centrosomes
- C. Intermediate filaments
- D. Microtubules
- E. Myosin filaments

Ans: C. Intermediate filaments

17. During which phase of mitosis does the kinetochore form?

- A. Anaphase A
- B. Anaphase B
- C. Metaphase
- D. Prophase
- E. Telophase

Ans: C. Metaphase

18. Which of the following statements about general features of epithelial tissues is false?

- A. Epithelia are generally avascular
- B. Epithelial tissues are capable of forming ducts and branching
- C. They form both exocrine and endocrine glands
- D. They have an extracellular matrix primary composed of Type I collagen fibers
- E. They are always morphologically bound to underlying connective tissue

Ans: D. They have an extracellular matrix primary composed of Type I collagen fibers