Epithelium Test Bank

1) Which of the following best describes epithelium?

A) Discontinuous sheets of cells

B) Sheets of cells with weak adhesion

C) Continuous sheets of cells adhering strongly to one another

D) Single layers of cells with no connections

2) What is the primary function of epithelial tissue?

A) Providing structural support

B) Transporting oxygen to tissues

C) Serving as a selective barrier

D) Storing energy reserves

3) Which structure separates epithelium from the adjacent connective tissue?

A) Basement membrane

B) Extracellular matrix

C) Intercellular junctions

D) Desmosomes

4) From which germinal layers does epithelium arise during embryogenesis?

A) Ectoderm, endoderm, and mesoderm

B) Ectoderm and endoderm only

C) Endoderm and mesoderm only

D) Mesoderm only

5) Which type of junction forms a seal between adjacent epithelial cells?

A) Tight junctions

B) Adherent junctions

C) Gap junctions

D) Desmosomes

6) What is the function of gap junctions in epithelial tissue?

A) Anchoring cells to the basement membrane

B) Providing a seal between adjacent cells

C) Allowing intercellular communication

D) Facilitating absorption of nutrients

7) Which specialized structure increases the surface area for absorption in epithelial cells?

A) Cilia

B) Stereocilia

C) Microvilli

D) Basal lamina

8) Where are goblet cells typically found in epithelial tissue?

A) Respiratory tract

B) Small intestine

C) Urinary bladder

D) Skeletal muscle

G) Which type of epithelium is best suited for areas subjected to mechanical stress?

A) Simple squamous epithelium

B) Simple cuboidal epithelium

C) Stratified squamous epithelium

D) Pseudostratified columnar epithelium

10) What is the function of transitional epithelium?

A) Providing a barrier against abrasion

B) Facilitating secretion of hormones

C) Allowing stretching and recoiling

D) Assisting in absorption of nutrients

11) What are connexons primarily involved in?

A) Cell-cell adhesion

B) Cell-matrix adhesion

C) Intercellular communication

D) Cell division

12) Loss or dysfunction of connexons can lead to:

A) Increased intercellular communication

B) Enhanced cell proliferation

C) Impaired tissue function

D) Strengthened cell adhesion

13) Which of the following epithelial types is found in the lining of blood vessels?

A) Simple squamous epithelium

B) Stratified squamous epithelium

C) Simple cuboidal epithelium

D) Pseudostratified columnar epithelium

14) What is the main function of microvilli in epithelial cells?

A) Absorption

B) Secretion

C) Movement

D) Protection

15) Which type of junction encircles the epithelial cell and anchors it to neighboring cells?

A) Tight junctions

B) Adherent junctions

C) Desmosomes

D) Gap junctions

16) Where are cilia mainly found in epithelial tissue?

A) Respiratory tract

B) Digestive tract

C) Urinary tract

D) Nervous tissue

17) What is the composition of the basal lamina?

A) Type IV collagen

B) Laminin

C) Nidogen and perlecan

D) All of the above

18) Which type of epithelium is found in the lining of the urinary bladder?

A) Simple squamous epithelium

B) Simple cuboidal epithelium

C) Stratified squamous epithelium

D) Transitional epithelium

19) What is the primary function of tight junctions in epithelial tissue?

A) Anchoring cells to the basement membrane

B) Facilitating intercellular communication

C) Forming a seal between adjacent cells

D) Increasing surface area for absorption

20) Where would you find pseudostratified columnar epithelium with cilia and goblet cells?

A) Trachea

B) Small intestine

C) Gall bladder

D) Kidney tubules

21) Hemidesmosomes anchor epithelial cells to which structure?

A) Basement membrane

B) Tight junctions

C) Gap junctions

D) Desmosomes

22) Which type of epithelial tissue is characterized by multiple layers of cells, with the superficial layer being squamous in shape?

A) Simple squamous epithelium

B) Stratified squamous epithelium

C) Simple cuboidal epithelium

D) Transitional epithelium

23) Which of the following structures are finger-like extensions of the plasma membrane that increase surface area for absorption?

A) Microvilli

B) Cilia

C) Stereocilia

D) Basal lamina

24) In which location would you find simple cuboidal epithelium in the body?

A) Lining of the respiratory tract

B) Surface of the skin

C) Thyroid gland follicles

D) Esophagus

25) What is the primary location of stratified columnar epithelium in the body?

A) Stomach lining

B) Respiratory tract

C) Urethra

D) Conjunctiva

26) What is the primary function of mesothelium?

A) Absorption

B) Protection

C) Secretion

D) Contraction

27) What is the structure that separates mesothelium from the underlying connective tissue?

A) Basement membrane

B) Reticular lamina

C) Peritoneum

D) Hemidesmosomes

28) Which of the following is a characteristic feature of mesothelium?

A) Highly vascular

B) Contains goblet cells

C) Forms a single layer of cells

D) Found in the epidermis of the skin

29) Mesothelium is best described as:

A) Stratified squamous epithelium

B) Simple squamous epithelium

C) Pseudostratified columnar epithelium

D) Transitional epithelium

30) Mesothelium is derived from which embryonic layer?

A) Endoderm

B) Mesoderm

C) Ectoderm

D) Exoderm

31) What is the primary function of mesothelial cells in the pleura?

A) Secretion of mucus

B) Absorption of nutrients

C) Facilitating movement during respiration

D) Providing structural support

32) The reticular lamina contributes to the overall strength and stability of:

A) Epithelial tissue

B) Muscle tissue

C) Nervous tissue

D) Connective tissue

33) The reticular fibers and anchoring fibrils of Collagen Type VII is a product of:

A) Epithelial tissue

B) Muscle tissue

C) Basement tissue

D) Connective tissue

34) What is the primary function of cilia in epithelial tissue?

A) Absorption of nutrients

B) sweeping of mucus

C) Detection of motion

D) Facilitation of cell division

35) Cilia are composed of which cellular structures?

A) Microtubules

B) Actin filaments

C) Intermediate filaments

D) Reticular fibers

36) Which of the following is true regarding the structure of cilia?

A) They are anchored to the basal lamina.

B) They contain a central pair of microtubules surrounded by nine outer doublet microtubules.

C) They are composed primarily of collagen fibers.

D) They are devoid of any cytoskeletal components.

37) Loss or dysfunction of cilia in the respiratory tract can lead to:

A) Increased mucus production

B) Enhanced gas exchange

C) Impaired mucociliary clearance

D) Strengthened immune response

38) Which type of epithelial tissue is characterized by the presence of cilia on its surface?

A) Simple squamous epithelium

B) Stratified squamous epithelium

C) Simple columnar epithelium

D) Transitional epithelium

39) What is the composition of the basal bodies of cilia?

A) Actin

B) Microtubules

C) Collagen

D) Intermediate filaments

40) The coordinated movement of cilia is facilitated by:

A) Myosin motor proteins

B) Dynein motor proteins

C) Kinesin motor proteins

D) Actin-binding proteins

41) Which layer of the pericardium primarily provides structural support and protection to the heart?

A) Visceral pericardium

B) Parietal pericardium

C) Fibrous pericardium

D) Epicardium

42) Which junction mutation causes epidermolysis bullosa?

A) Tight junctions

B) Adherent junctions

C) Desmosomes

D) Hemidesmosomes

43) Which junction has ZO proteins?

A) Zonula Adherens

B) Zonula Occludens

C) Nexus

D) Macula Adherens

44) Defects in which proteins may compromise the fetal blood-brain barrier?

A) Claudins

B) Occludins

C) E-cadherins

D) Desmogleins

45) Loss of what proteins in carcinomas promotes tumor invasion ?

A) Claudins

B) Occludins

C) E-cadherins

D) Desmocollins

46) Autoimmunity against desmoglein leads to dyshesive skin disorders characterized by:

A) Reduced metabolic function of mesothelial cells

B) Reduced metabolic function of epidermal cells

C) Reduced cohesion of epidermal cells

D) Reduced functions of basement membrane of epidermal cells

47) Loss of what proteins in carcinomas promotes tumor invasion ?

A) Claudins

B) Occludins

C) E-cadherins

D) Desmocollins

48) Mutations in which junctions have been linked to certain types of deafness and peripheral neuropathy?

A) Zonula Adherens

B) Zonula Occludens

C) Macula Adherens

D) Nexus

Answer Key

1) C	46)C
2) C	47)C
3) A	48)D
4) A	
5) A	
6) C	
7) C	
8) A	
9) C	
10) C	
11) C	
12) C	
13) A	
14) A	
15) B	
16) A	
17) D	
18) D	
19) C	
20) A	
21) A	
22) B	
23) A	
24) C	
25) D	
26) B	
27) A	
28) C	
29) B	
30) B	
31) D	
32) A	
33) D	
34) B	
35) A	
36) B	
37) C	
38) C	
39) B	
40) B	
41) C	
42) D	
43) B	
44) B	
45)C	