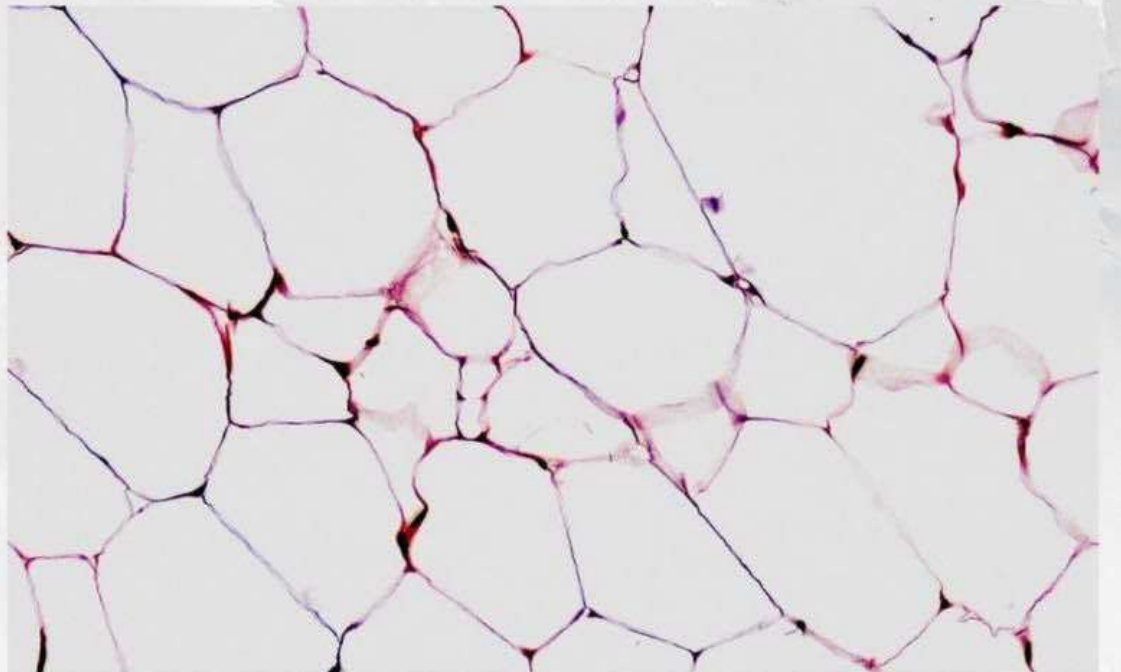


# Test Bank



# Histology

Done By : Sanad Syam



# Sample preparation

Q1) During the preparation of a routine H&E slide, what step occurs after the tissue is fixation ?

- A. clearing
- B. Embedding in paraffin
- C. Staining
- D. Slicing
- E. Dehydration

Answer : E

Q2) During the preparation of a routine H&E slide, what allows the tissue to hold its form?

- A. Fixation
- B. Embedding in paraffin
- C. Staining
- D. Slicing
- E. Dehydration

Answer: B

Q3) During the preparation of a routine H&E slide, Alcohol is removed in organic solvents in which both alcohol and paraffin are miscible. This process is called:

- A. clearing
- B. fixation
- C. dehydration
- D. Embedding
- E. Infiltration

Answer: A

Q4) During a surgery, the surgeon took a biopsy and needed its histochemical analysis report in a short time to complete the surgery. How could pathologists avoid time barrier in sample preparation?

- A. By using Freezing of tissues technique
- B. By dehydrating the biopsy in one step
- C. By using plastic solvents rather than paraffin in embedding
- D. By Staining with more reactive dyes
- E. By inactivating more enzymes in tissues

Answer: A

Q5) Which of the following materials is/are used in embedding in sample preparation for TEM?

- A. paraffin wax
- B. epoxy resin
- C. ethanol
- D. a and b
- E. none of the above

Answer: B

Q6) To identify and localize a specific protein within cells or the extracellular matrix one would best use what approach?

- A. Light microscopy
- B. Enzyme histochemistry
- C. Immunohistochemistry
- D. Transmission electron microscopy
- E. scanning electron microscopy

Answer: C

# Microscopy

Q7) The part of bright-field microscope that collects and focuses a cone of light that illuminates the tissue slide on the stage is called :

- A. objective lens
- B. condenser
- C. ocular lens
- D. a and c
- E. none of the above

Answer: B

Q8) Phase-Contrast Microscope creates contrast by:

- A. Changing of light speed through a specimen with different refractive indices
- B. Staining
- C. Using a small point of high intensive light
- D. the amount of radiolabel applied to the specimen
- E. none of the above

Answer: A

Q9) Which microscope would be particularly useful for looking at living cells?

- A. light microscopy
- B. fluorescence microscopy
- C. Phase contrast microscope
- D. scanning electron microscopy
- E. Transmission electron microscope

Answer: C

Q10) If the surface of the specimen is dried and spray-coated with a very thin layer of heavy metal (often gold) then we expect which of the following microscopes to be used?

- A. Brightfield Microscope
- B. TEM
- C. SEM
- D. c and b
- E. all of the above

Answer: C

Q11) For what extent of resolution does TEM imaging permit?

- A.  $3 \times 10^{-8}$
- B.  $0.3 \times 10^{-8}$
- C.  $3 \times 10^{-6}$
- D.  $0.3 \times 10^{-6}$
- E.  $3 \times 10^{-8}$

Answer: B (3 nanometer)

Q12) The maximal resolving power of the light microscope is approximately  $0.2 \mu\text{m}$ , which can permit clear images magnified ..... times?

- A. 500 – 1000
- B. 1000 – 1500
- C. 2000 – 2500
- D. 2500 – 3000
- E. 4000

Answer: B

# Epithelium

Q13) which of following is considered as an epithelial tissue feature:

- A. polyhedral cell
- B. avascular cells.
- C. the major construction of the tissue is ECM.
- D. A and B are correct

Answer: D

Q14) one of following is a function of epithelial tissue:

- A. may act as contractile cells
- B. specialized sensory cells
- C. absorption
- D. all of the above are correct

Answer: D

Q15) the ducts of the glands are formed by:

- A. epithelial tissue
- B. connective tissue
- C. it depends on the type of the gland
- D. none of the above

Answer: A

Q16) lamina propria is:

- A. a muscular tissue
- B. a connective tissue
- C. an epithelial tissue
- D. a nervous tissue

Answer: B

Q17) the main subunits of microvilli are:

- A. Microtubules
- B. Actin filaments
- C. Intermediate filaments
- D. A and C

Answer: B

Q18) stereocilia are :

- A. Highly motile
- B. Composed of microtubules
- C. associated with very high secretory function
- D. Longer than microvilli

Answer: D

Q19) stereocilia and microvilli :

- A. Have the same length
- B. Contain microfilaments
- C. Have the same diameters
- D. B and C are correct

Answer: D

Q20) the surface structure of intestinal cells is called:

- A. Brush border
- B. Straited border
- C. It doesn't have a name
- D. A and B can be right

Answer: B

Q21) axoneme is:

- A. The core structure of cilium
- B. The two central microtubules of cilium
- C. The 9+2 assembly of microtubules
- D. None of the above

Answer: C

Q22) nexin molecules :

- A. Are extend from A microtubule and make temporary crossbridges with the B microtubule
- B. Connect the microtubules triplets with each other to form a ring
- C. Bind with actin filaments
- D. None of the above

Answer: B

Q23) basal lamina :

- A. Is the same as the basement membrane
- B. Is secreted by both epithelial and connective tissue
- C. It consists of a network of fine fibrils
- D. All of the above are wrong

Answer: C



Q24) laminin is :

- A. Short proteoglycans
- B. Large glycoproteins
- C. A component of basal lamina
- D. B and C

Answer: D

Q25) anchoring fibrils

- A. Are parts of reticular lamina
- B. Link the basal lamina with reticular fibers
- C. Represent polymers of type VII collagen
- D. All of the above are correct

Answer: D

Q26) which of these junctional complexes form a band ( ربط ) between adjacent cells :

- A. Tight junctions
- B. Adherent junctions
- C. Gap junctions
- D. A and B only

Answer: D

Q27) which of these junctional complexes mediate intercellular communication:

- A. Tight junctions
- B. Adherent junctions
- C. Gap junctions
- D. Desmosomes

Answer: C

Q28) cells adhesion is mediated by :

- A. Microtubules
- B. Cadherins
- C. Connexins
- D. None of the above

Answer: B

Q29) the cytoplasmic ends of cadherins bind to:

- A. Actin filaments
- B. Another cadherins with the presence of  $Ca^{++}$
- C. Intermediate filaments
- D. Catenins

Answer: D

Q30) Catenins bind to

- A. Intermediate filaments
- B. Actin filaments
- C. Microtubules
- D. None of the above

Answer: A

Q31) the main subunits that form gap junctions are:

- A. Cadherins
- B. Claudin
- C. Connexins
- D. Zo-1 and Zo-2

Answer: C

Q32) the major function of hemidesmosomes is:

- A. Intercellular communication
- B. Anchoring cytoskeleton to the basal lamina
- C. It doesn't have a function
- D. None of the above is correct

Answer: B

Q33) When a cell cannot directly transfer small molecules with (< 1.5 nm) diameters to its adjacent cell, then you should expect that we have a mutation in.....genes.

- A. Nexus
- B. Zonula adherens
- C. Zonula occludens
- D. Hemidesmosomes
- E. Cadherins

Answer: A

Q34) The tissue that lines the vessels is :

- A. Simple squamous epithelium
- B. Simple columnar epithelium
- c. Simple cuboidal epithelium
- D.A and C can be correct

Answer: a

Q35) Mesothelium is:

- A. Simple squamous epithelium that lines serous cavities
- B. Simple squamous epithelium that lines the lumen of the cardiovascular system
- C. Found in kidney tubules
- D.B and C can be correct

Answer: A

Q36) The tissue which lines the alveoli is:

- A. Simple cuboidal epithelium
- B. Simple squamous epithelium
- C. Simple columnar epithelium
- D. None of the above

Answer: B

Q37) The tissue that covers the ovaries and can be found in kidney tubules is:

- A. Simple cuboidal epithelium
- B. Simple squamous epithelium
- C. Simple columnar epithelium
- D. None of the above

Answer: A

Q38) the main function of simple columnar epithelium is:

- A. Exchange
- B. Covering and secretion
- C. Absorption
- D. None of the above

Answer: C

Q39) The tissue that is found in the fallopian tube (oviduct) is:

- A. Simple cuboidal epithelium
- B. Ciliated simple columnar epithelium
- C. Simple columnar epithelium with microvilli and goblet cells
- D. Pseudostratified columnar epithelium

Answer: B

Q40) The tissue that lines the upper respiratory tract is :

- A. Simple squamous epithelium
- B. Simple cuboidal epithelium
- C. Pseudostratified columnar epithelium
- D. None of the above

Answer: C

Q41) The major role of stratified epithelia is:

- A. Exchange
- B. Secretion
- C. Absorption
- D. Protection

Answer: D

Q42) The tissue that forms the epidermis is :

- A. Simple squamous epithelium
- B. Simple cuboidal epithelium
- C. Stratified squamous non-keratinized epithelium
- D. Stratified squamous keratinized epithelium

Answer: D

Q43) Stratified squamous non-keratinized epithelium forms lining

- A. Oral cavity
- B. Esophagus
- C. Vagina
- D. All of the above

Answer: D

Q44) The tissue seen in the conjunctiva lining the eyelids is

- A. Stratified cuboidal epithelium
- B. Stratified columnar epithelium
- C. Stratified squamous keratinized epithelium
- D.A and B are correct

Answer: B

Q45) Umbrella cells :

- A. Are large, dome-like cells
- B. Contain large amounts of keratin
- C. Are part of urothelium
- D.A and C are correct

Answer: D

Q46) The cells which specialized to protect underlying tissues from the hypertonic and potentially cytotoxic effects of urine are :

- A. Keratinized cells
- B. Non-keratinized cells
- C. Umbrella cells
- D.None of the above

Answer: C

Q47) Goblet cells are found commonly in all of the following except:

- A. Simple squamous epi.
- B. Simple columnar epi.
- C. Simple cuboidal epi.
- D. Pseudostratified epi

Answer: a

# Glandular epithelium

Q48) Derived by modification of epithelium into secretory structures

A)Cartilages

B)Merocrine

C)Goblet

D)Glands

Answer is: E

Q49)All of the following are correct about glands except

A)They are epithelial cells

B)They may synthesize, store, and secrete proteins, lipids , or complexes of .carbohydrates and proteins

C)Some glands have high synthesizing activity, other have low synthesizing activity

D)All of the above are correct

Answer is: D

Q50)The substance that is produced by the gland to be used in the body, This process is

A)Excretion

B)Secretion

C)Hydration

D)Histogenesis

Answer is: B

Q51)The mammary glands secrete

- A)Proteins
- B)Lipids
- C)Complexes of Carbohydrates and Proteins
- D)All of the above are correct

Answer is: D

Q52)Most of our glands are MULTICELLULAR GLANDS such as

- A)Salivary glands
- B)Goblet glands
- C)Thyroid glands
- D)A and C are correct

Answer: D

Q53)The products of endocrine glands are called

- A)Enzymes
- B)Hormones
- C)Antibodies
- D)None of the above

Answer:B

Q54)Membrane bounded vesicles can be found in

- A)Apocrine secretion
- b)Merocrine secretion
- c)Salivary glands
- d)b and C are correct

Answer: E



Q55) Mucous-Secreting glands synthesize:

- A) Glycosylated proteins
- B) Mucins
- C) Hydrated mucins
- D) A and B only
- E) All of the above are correct

Answer: D

Q56) Mucous cells can be stained by

- A) PAS method
- B) H&E stain
- C) DAPI stain
- D) Sudan black
- E) All of the above are correct except D

Answer: A

Q57) Exocrine glands are classified according to

- A) Number of cells forming it
- B) Secretory units
- C) Epithelium-walled duct structure
- D) Mode of secretion
- E) All of the above are correct

Answer: E

Q58) Branched Tubular glands can be classified as

- A) Simple Glands
- B) Compound glands
- C) Multicellular glands
- D) Exocrine glands
- E) All of the above are correct except B

Answer: E

Q59) an Example of branched acinar glands:

- A) Glands of uterus
- B) Glands of stomach
- C) Intestinal glands
- D) Sebaceous glands of the skin
- E) A and B are correct

Answer: D

Q60) Compound Alveolar glands have

- A) Several elongated secretory units
- B) Several saclike secretory units
- C) Several coiled secretory units
- D) A and C are correct
- E) None of the above

Answer: B

Q61)The goblet cells have in their apical region

A)Secretory granules

B)Nucleus

C)RER

D)Mucin

E)A and D are correct

Answer: E

Q62)Sweat glands

A)Have high synthesizing activity

B)Have low synthesizing activity

C)Have long and coiled secretory portions

D)A and C are correct

E)B and C are correct

Answer: E

Q63) The release of lipid droplets from cells is which type of secretion:

A. Merocrine

B. Serous

C. Apocrine

D. Mucous

E. Holocrine

Answer ; c

Q64) Which of the following pairs is mismatched:

- A. Simple tubular gland/mucous glands of colon, intestinal glands or crypts (of Lieberkühn)
- B. Simple branched tubular gland/sweat glands
- C. Simple coiled tubular/glands in the uterus and stomach
- D. Sweat glands/low synthesizing activity
- E. b and c

Answer : E

Q65) All of the following are secreted by glandular epithelial except:

- a. Lipids
- B. Proteins
- C. Urea
- D. Complex of carbohydrates and protein

Answer : c

Q66) All of the following are correct regarding exocrine glands except:

- A. Goblet cells are unicellular and are present in the lining epithelia of intestine and respiratory tract
- B. Salivary glands are multicellular glands
- C. They disappear after invagination
- D. They maintain contact with the surface
- E. Multicellular glands form most of the body glands

Answer: c

Q67) Which of the following is incorrect regarding to goblet cells?

- A. They are unicellular(scattered)
- B. Secretory granules containing mucin are concentrated at the base of the cell
- C. They secrete lubricating mucin
- D. Highly polarized
- E. They are classified as endocrine glands

Answer : B+E

Q68) Choose the false statement of the following regarding to glands classification:

A. Exocrine products are released directly or through a duct onto a surface

B. Thyroid gland is an example for exocrine glands

C. Endocrine release hormones into the blood stream

D. Exocrine glands can be unicellular and multicellular

E. B+D

Answer: B

# Connective tissue

Q69) Which of the following is NOT a fiber found in connective tissue?

- a. Collagen fiber
- b. Elastic fiber
- c. Reticular fiber
- d. Purkinje fiber
- e. All of the above are fibers found in connective tissue

answer : d

Q70) Which cell is a connective tissue macrophage?

- a. Kupffer cells
- b. Histiocyte
- c. Dust cell
- d. Langerhans cell
- e. Microglia

Answer: b

Q71) Which of the following can be classified as a specialized connective tissue?

- a. Mesenchyme
- b. Mucous connective tissue
- c. Dense connective tissue
- d. Blood
- e. Loose connective tissue

Answer: d

Q72) Which connective tissue cell type contains properties of smooth muscle cell?

- a. Fibroblast
- b. Myofibroblast
- c. Histiocyte
- d. Plasma cell
- e. Mast cell

Answer: b

Q73) Which of the following can be classified as embryonic connective tissue?

- a. Cartilage
- b. Mucous connective tissue
- d. Adipose tissue
- d. Bone
- e. Blood

Answer: b

Q74) What type of tissue makes up the dermis of the skin?

- a. Mucous connective tissue
- b. Mesenchyme
- c. Loose irregular connective tissue
- d. Dense irregular connective tissue
- e. Dense regular connective tissue

Answer: d

Q75) Which of the following is NOT primarily composed of connective tissue?

- a. Bone marrow
- b. Articular cartilage
- c. Heart
- d. Mesenchyme
- e. Fat

Answer: c

Q76) Which one of these cells is not a cell type routinely found in loose connective tissue?

- a. Fibroblast
- b. Microglia
- c. Histiocyte
- d. Plasma cell
- e. Mast cell

Answer:b

Q77) Which of the following can be classified as connective tissue proper?

- a. Adipose tissue
- b. Dense irregular connective tissue
- c. Bone
- d. Blood
- e. Cartilage

Answer:b



Q78) What does connective tissue develop from?

- a. Mesothelium
- b. Mesenchyme
- c. Mesangial cells
- d. Mesentery
- e. Wharton's jelly

Answer:b

Q79 ) Which of the following is a component of the ground substance?

- a. Hyaluronic acid
- b. Proteoglycans
- c. Glycosaminoglycans
- d. Chondroitin sulfate
- e. All of the above

Answer:e

Q80) Which connective tissue cell type produces the ground substance in connective Tissue?

- a. Fibroblast
- b. Myofibroblast
- c. Histiocyte
- d. Plasma cell
- e. Mast cell

Answer: a

Q81) Which connective tissue cell is derived from B lymphocytes?

- a. Fibroblast
- b. Myofibroblast
- c. Histiocyte
- d. Plasma cell
- e. Mast cell

Answer:d

Q82) What type of connective tissue is an undifferentiated tissue found in the embryo?

- a. Mucous connective tissue
- b. Mesenchyme
- c. Loose irregular connective tissue
- d. Dense irregular connective tissue
- e. Dense regular connective tissue

Answer:b

Q83) What type of tissue is a ligament composed of...?

- a. Mucous connective tissue
- b. Mesenchyme
- c. Loose irregular connective tissue
- d. Dense irregular connective tissue
- e. Dense regular connective tissue

Answer: e

Q84) Which of the following is not associated with connective tissue?

- a. Tightly packed cells
- b. Extracellular fibers
- c. Tissue fluid
- d. Ground substance
- e. None of the above; all of the above are seen with connective tissue

Answer:a

Q85) The collagen type that anchoring the basal lamina with underlying reticular lamina?

- A) Collagen type I
- B)Collagen type VI
- C)Collagen type VII
- D)Collagen type II
- E)B and C are correct

Answer is : C

Q86) The function/s of collagen type IV:

- A)Resisting pressure
- B)Anchoring Fibrils
- C)Meshwork of the lamina densa
- D)Resisting tension
- E) B and C are correct

Answer is: C

Q87) All of the following are correct about COLLAGEN TYPE VII except:

A)it is synthesised by epithelium cells of epidermis

B)it is short collagen

C)it is located in Derma-Epidermal junction

D)it is a linking collagen

E)All of the above are correct

Answer is:A

Q88) In RER, 3 a chains of polypeptides are selected to form procollagen

What type of bonds will be formed between these chains?

A)Hydrogen bonds

B)disulfied bonds

C)non-covalent bonds

D)elastic bonds

E)Van der wals interactions

Answer is: B

Q89) The correct arrangement of the components of a TENDON?

A)Precollagen-Collagen fiber-collagen fibril-bundle of collagen fibril

B)Procollagen-collagen fiber-collagen fibril-bundle of collagen fibril

C)Procollagen-collagen fibril-collagen fiber-Bundle of collagen fiber

D)B and C are correct

Answer is:C

Q90) Reticular fibers are:

- A)Thin structures
- B)Extensive network of collagen type III
- C)Formed in osteoblasts
- D)Found in lymph nodes
- E)All of the above are correct except c

Answer is: E

Q91) Ground substance is:

- A)Transparent structure
- B)Highly hydrated structure
- C)Viscous Structure
- D)Complex mixture of 3 kinds of macromolecules
- E)All of the above are correct

Answer is: E

Q92) The structure that is responsible for the gel state of ECM is:

- A)GAGs
- B)Proteoglycan
- C)glycoproteins
- D)Fibers
- E)A and B

Answer is: B

Q93) We can find HYALURONIC ACID in:

A)Blood

B)Bone

C)Mast cells

D)Most connective tissue

E)Heart

Answer is:D

Q94) The GAGs type that is responsible of lubricating joints and organs is:

A)Hyaluronan

B)Keratan sulfate

C)Dermatan sulfate

D)Heparan sulfate

E)Chondroitin 4-Sulfate

Answer is:A

Q95) Laminin and Fibronectin are examples of:

A)GAGs

B)Glycoproteins

C)Proteoglycan

D)A and B are correct

E)None of the above

Answer is:B

Q96) The type of connective tissue that fills the space between muscle and nerve cells is:

- A) Mesenchymal connective tissue
- B) Dense regular connective tissue
- C) Adipose connective tissue
- D) loose connective tissue
- E) Dense irregular connective tissue

Answer is: D

Q97) Mesenchyme consists of:

- A. largely of viscous ground substance with few collagen fibers
- B. Large numbers of collagen fibers with small ground substance
- C. equal amounts of collagen fibers and ground substance
- D. none of the above

Answer: A

Q98) redness and swelling with heat and pain in tissues is caused by:

- A. plasma cells
- B. mast cells
- C. Macrophages
- D. Langerhans cells
- E. Adipocytes

Answer: b

Q99) Elastic fibers and lamellae stain heavily with H&E because they are composed of elastin protein molecules.

True

False

Answer: F

Q100) Sulfated GAGs are important constituents of what extracellular structures:

A. Hyaluronan

B. Elastic fibers

C. Type I collagen

D. Proteoglycans

E. Multiadhesive glycoproteins

Answer:D

Q101) What cells numerous in loose connective tissue are filled with secretory granules and stain with metachromasia?

A. Macrophages

B. Active fibroblasts

C. Fibrocytes

D. Leukocytes

E. Mast cells

Answer:E



DON'T  
STOP  
UNTIL  
YOU'RE  
PROUD