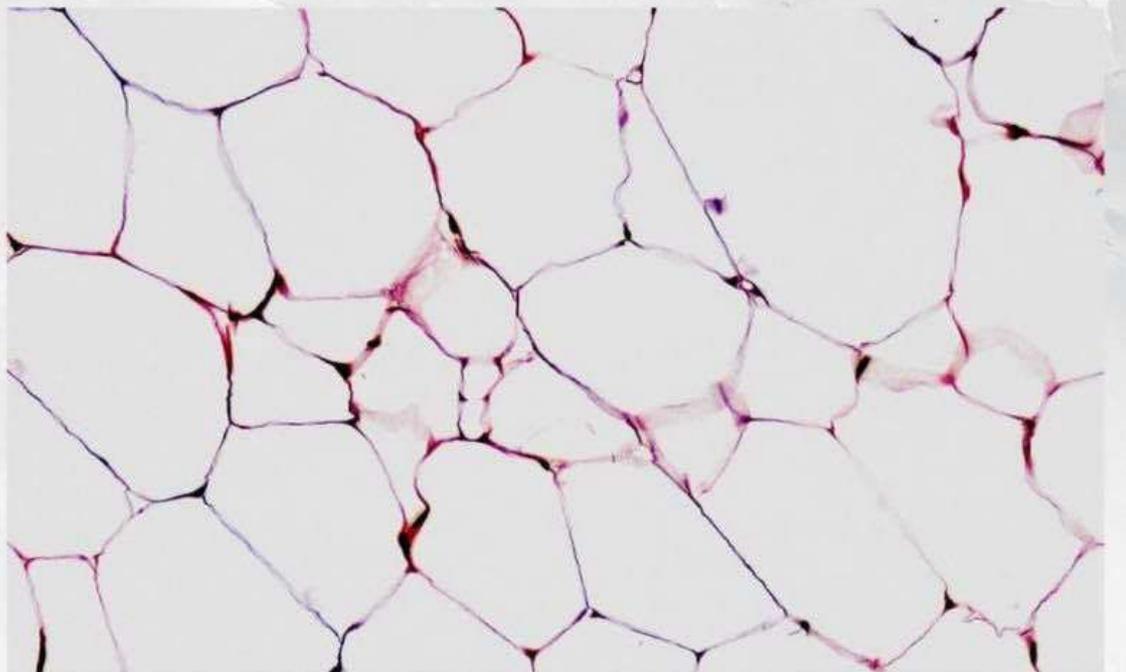


Test Bank



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. 3×10^{-8}
- B. 0.3×10^{-8}
- C. 3×10^{-6}
- D. 0.3×10^{-6}
- E. 3×10^{-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

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