



Past paper's for histology

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Med exam

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1-. Epidermolysis bullosa is a skin blistering disorder in which the epithelium of the skin loses contact with underlying connective tissue. This is most probably caused by a problem in:

A-desmosomes

B-tight junctions

C- gap junctions

D- hemidesosomes

E-adherent junctions

Answer:d

2-. Which of the following is true with regard to electron microscopy?

a- its resolving power can reach 0.2nm

b- it uses glass lenses

c- it gives color images

d- uses thin sections (1-30um)

e- samples are mounted on slide

answer:d

3. Hydroxyapatite crystals are made mainly from the combination of:

a- Chondroitin sulfate and inorganic salts

b- Collagen type 1 fibers and carbon molecules

c- Calcium, phosphate and collagen type 1 fibers

d- Glycoproteins and vitamin D

e- Calcium and phosphate

answer:e

4. Respiratory epithelium is:

- a- ciliated simple columnar epithelium with goblet cells
- b-ciliated pseudo stratified columnar epithelium with goblet cells
- c- non-ciliated stratified squamous epithelium
- d- non-ciliated pseudo stratified columnar epithelium with goblet cells
- e-ciliated pseudo stratified squamous epithelium with goblet cells

answer:b

5. Which of the following is true regarding cilia?

- a- immotile but rhythmic
- b- have a 9+2 axoneme structure
- c- very short compared to microvilli
- d- function to increase surface area
- e- found in respiratory epithelium only

answer:b

6. Most bones contain both spongy and compact bone tissue. Spongy bone tissue is located:

- a-Inside the Haversian systems
- b-Deep to compact bone
- c-Overlying compact bone
- d-Outside the periosteum
- e-Only in the diaphysis

answer:b

7. Stratified epithelia is named according to the:

- a- shape of cells in basal layer
- b- size of cells in apical layer
- c- stain of cells in basal layer

d- shape of cells in apical layer

e- size of cells in basal layer

answer:d

8. Which of the following structures appears most apical on TEM of epithelial cells lining the intestines, and function to prevent leakiness in the paracellular pathway?

a-desmosomes

b-zonula adherens

c-gap junctions

d-zonula occludens

e-macula adherens

answer:d

9. Which of the following materials reacts with the amine groups of proteins preventing their degradation as well as cross-links adjacent proteins?

a-gluteraldehyde

b-alcohol

c- paraffin

d- formaldehyde

e- xylene

answer:a

10. Precise arrangements of microscopic cylindrical structures oriented parallel to the long axis of the bone are the:

a-Volkmann's canals

b-Haversian canals

c-Canaliculi

d-Lacunae

e-Lamellae

answer:b

11. Which of the following materials is a solvent for resin used in sample preparation?

a-wax

b- uranyl acetate

c-xylene

d- propylene oxide

e- plastic

answer:e

12. Bone tissue, choose the CORRECT statement:

a- Lamellae surrounding Haversian canals are called circumferential lamellae

b- Bone lamellae permit diffusion through the matrix

c- Collagen fibers in adjacent lamellae run parallel to each other

d- Sharpey's fibers are also called perforating fibers

e- None of the above

answer:d

13. All the following is true regarding Hematoxylin EXCEPT:

a- it's a basic dye

b-it has a positive charge

- c- it can stain mitochondria
- d- it stains basophilic structures
- e- it can stain GAGs

answer:c

14. Which of the following cells is located in Howship's lacuna

- Osteoblast
- Osteoclast
- Osteocyte
- Osteogenic cell
- Chondroblast

15. Which of the following is NOT a characteristic of Goblet cells?

- a- Highly polarized
- b- Found in any type of epithelium
- c- Large supranuclear Golgi
- d- Prominent basally located RER
- e- Considered unicellular glands

answer:b

16. You are a researcher interested in Keratan sulfate, which of the following would you study?

- a-Dense regular connective tissue
- b-Skin
- c-Blood vessels
- d-Cartilage

e-Umbilical cord

answer:d

17. Which of the following cells are a population of undifferentiated cells that give origin to most of the cell types in connective tissue?

a- Fibroblasts

b-Fibrocytes

c-Preadipocytes

d-Mesenchymal cells

e-Leukocytes

answer:d

18. You are a researcher and you decide to find a cure for Covid-19 virus (Corona). First you purify the antigen unique of the virus and expose some leukocytes in the lab. Which cells do you expect to synthesize antibodies to Covid-19?

a- Mast cells

b- Plasma cells

c- T-cells

d- Macrophages

e- Dendritic cells

answer:b

19. In which of the following would you find dense irregular connective tissue?

a- Lamina propria

b- Tendons

c- skin dermis

d- Lymph node framework

e- Mesentry

answer:c

20. You are a researcher interested in the framework of spleen. Which of the following stains would you use?

a- silver salts

b- H &E

c- Orcein

d- Aldehyde fuchsin

e- Alacian blue

answer:a

21. Which of the following cells are mostly involved in the initial stages of wound healing as it contracts to help in approximation (تقريب) of the edges of the wound?

a- Smooth muscle cells

b- Fibrocytes

c- Myofibroblasts

d- Leukocytes

e-Mesenchymal cells

answer:c

22. Woven bone, choose the wrong statement:

a-It is formed during repair of fracture sites

- b- Is the first bone tissue to appear in embryonic development**
- c- It has a higher mineral content compared to secondary bone**
- d- It is degraded by osteoclasts**
- e- Its collagen fibers are not organized into lamellae**

answer:c

23. Which of the following is classified as sheet-forming collagen?

- Type I**
- Type II**
- Type III**
- Type IV**
- type VIII**

Answer: Type IV

24. Which of the following cells is described as unilocular?

White adipocyte

Fibrocyte

Chondrocyte

Brown adipocyte

1 + 3

Answer: white adipocyte

25. Childhood obesity involves which of the following processes?

a- Hypertrophy of adipocytes

b- Hyperplasia of adipocytes

c- Differentiation of mesenchymal cells into preadipocyte

d- 1+2

e- 1+2+3

answer:b

26. Which of the following is a term used to describe the shortest distance between two points that can still be distinguished as separate entities? Contrast

Resolution

Magnification

Wavelength

Focus

Answer: resolution

27. One of the following parts of a bright - field microscope focuses light on the object to be studied .

Focusing -piece

Objective lens

Beamsplitter

Ocular lens

Condenser

Answer: condenser

28. You are a researcher interested in the birefringence features of the extracellular collagen, and you are looking to obtain a highly contrasted image. The microscope most useful to you is:

a- polarizing microscope

b- confocal microscope

c- TEM

d- fluorescent microscope using phalloidin

e-phase contrast microscope

answer:a

29. You are a researcher in nanotechnology interested to understand the ultrastructural distribution of a potential biomaterial used for as an intracellular drug. The microscope most useful to you is:

confocal microscope

fluorescent microscope using phalloidin

TEM

polarizing microscope

SEM

30. Which of the following materials represent the largest component of the dry weight of cartilage?

Collagen I

Prpteoglycans

Collagen XI & IX

Glycoproteins

Collagen II

Answer: Collagen II

31. In which of the following areas would you find elastic cartilage?

Most of the fetal skeleton

Knee meniscus

Symphysis pubis

Epiglottis

Articular ends of long ends

Answer: epiglottis

32. Which of the following processes means "chondroblast differentiation from progenitor cells in the perichondrium"?

Interstitial growth

Cartilage repair

Appositional growth

Perichondrial scarring

Chondrial scarring

Answer: Appositional growth

33. Territorial matrix is found immediately surrounding lacunae and is intensely basophilic due to the presence of:

Collagen II

Chondrocytes

Proteoglycans

Chondroblasts

Collagen XI & IX

Answer: Proteoglycans

