The histological items that must be recognized in the sections

Histology MTO 1

55 Kidney (HE)
simple squamous epithelium
simple cuboidal epithelium

52 Trachea (HE)
pseudostratified columnar epithelium with kinocilia

36 Esophagus (HE)
stratified squamous nonkeratinized epithelium:
- str. planocellulare
- str. spinosum
- str. basale

78 Skin (HE)
layers of skin:
- epidermis:
  - str. corneum
  - str. lucidum
  - str. granulosum
  - str. spinosum
  - str. basale
- dermis:
  - papillary layer of dermis
    - loose connective tissue
      - dermal papillae
    - dense irregular connective tissue
- hypodermis / subcutis

8 Elastic cartilage (orcein)
light microscopic components of cartilage:
- chondron
- chondrocytes
- capsular matrix
- territorial matrix
- interterritorial matrix
- perichondrium
- elastic fibers

10 Ground section of bone
light microscopic components of the lamellar bone:
- osteon
- lacunae and canaliculi
- Haversian canals
- Volkmann's canals
- concentric lamellae
- interstitial lamellae
- outer circumferential lamellae
- inner circumferential lamellae

11 Endochondral ossification (HE)
primary ossification center
secondary ossification centers
epiphysial growth plate:

- zone of reserve cartilage
- zone of proliferation
- zone of cartilage degeneration
    - hypertrophy and calcification
- zone of resorption

bony guiding spicule
cell types:
- chondrocyte
- osteoblast
- osteocyte
- osteoclast

12 Smooth muscle (HE)

light microscopic features of the smooth muscle cell:
- shape and location of their cell nuclei

13 and 14 Striated muscle (HE)

muscle fiber:
- shape and location of their cell nuclei
- cross-striations

connective tissue fasciae:
- endomysium
- perimysium
- epimysium

15 Cardiac muscle (HE)

light microscopic features of the cardiac muscle cell:
- shape and location of their cell nuclei
- cross-striations

intercalated disks (Eberth's line) between adjacent cells

16 Cardiac muscle (iron-haematoxylin)

light microscopic features of the cardiac muscle cell:
- shape and location of their cell nuclei
- cross-striations

intercalated disks (Eberth's line) between adjacent cells

72 and 73 Peripheral nerve (HE)

nerve fibers:
- myelin sheath
- (Schwann cell)

node of Ranvier
connective tissue envelopes:
- endoneurium
- perineurium
- epineurium

80 Spinal cord (HE)

neurons:
- Deiters alpha-motoneuron in the anterior horn
    - perikaryon
    - nucleus, nucleolus
    - Nissl substances

glial cells:
- ependymal cells lining the central canal

21 Aorta (resorcin-fuchsin)

main layers of elastic type of arteries:
- tunica intima:
    - endothelium
    - subendothelial layer

- tunica media:
  - internal elastic lamina/membrane
  - external elastic lamina/membrane
- tunica adventitia:
  - vasa vasorum (vessels of vessels)

22 Artery and vein (HE)

main layers of the muscular type of arteries and the veins
- comparison of these two types of blood vessels

diagnostic importance of the prsence or absence of internal elastic lamina

52 Trachea (HE)

main layers (tunicae) and thinner layers (laminae):
- mucosa / mucous membrane
  - lamina epithelialis
    - characterization of this covering epithalium
  - lamina propria
- tunica submucosa
- tunica fibromusculocartilaginea
- tunica adventitia

exocrine glands:
- intraepithelial unicellular gland (goblet cell)
- extraepithelial gland:
  - secretory portion (acinus) and excretory duct

tracheal cartilage in the cartilaginous wall:
- characterization of hyaline cartilage

trachealis muscle in the membranous wall:
- characterization of smooth muscle

53 Lung (HE)

distinction between bronchi and bronchioli

layers of bronchus

pseudostratified columnar epithelium with kinocilia

exocrine glands:
- intraepithelial unicellular gland (goblet cell)
- extraepithelial gland

hyaline cartilage

smooth muscle

respiratory bronchiole

alveolar duct

pulmonary alveolus:
- type I pneumocyte
- type II pneumocyte

alveolar saccule

dust cell

54 Lung (orcein)

elastic fibers

alveoli