

University of Szeged, Faculty of Medicine
Department of Anatomy, Histology and Embryology

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Topic list for the **Anatomy end-semester exam
of the **First semester**
Academic year **2018/2019, Autumn term****

I. General anatomy and anatomy of the upper limb

1. General features and classification of bones. Types of ossification.
2. Connections between bones. Classification and general description of joints.
3. General features of skeletal muscles and fasciae. Types of muscles. Innervation and regeneration of muscles.
4. Biomechanism of the muscle lever functions. Structural and functional features of myo- and osteotendinous junctions, tendon sheaths.
5. The bones, joints and movements of the shoulder girdle. Radiological anatomy of the shoulder girdle.
6. The gross and radiological anatomy and movements of the shoulder joint and the participating muscles. The morphological features and biomechanics of the rotator cuff.
7. The gross and radiological anatomy and movements of the elbow joint and the participating muscles.
8. Pronation and supination in the forearm: participating joints and muscles.
9. The gross and radiological anatomy and movements of the wrist joint and the participating muscles.
10. Joints and movements of the hand. Radiological anatomy of the hand.
11. The anatomy, innervation and function of the spinohumeral and thoracohumeral muscles.
12. Classification (types) and innervation of medium and large blood vessels. Types of vascular anastomoses.
13. Capillaries: structure, function, types.

14. The systemic circulation: the large branches of the aorta and the great veins.
15. The branches and anastomoses of the axillary artery.
16. The branches of the brachial artery; collateral circulation of the elbow.
17. Palmar arterial arches: topography and branches.
18. The venous and lymphatic drainage of the upper limb.
19. The organization of spinal cord segments and spinal nerves. The general organization and features of the cranial nerves.
20. Organization and supply areas of the brachial plexus.
21. Branches of the median nerve, functional loss of the median nerve.
22. Branches of the ulnar nerve, functional loss of the ulnar nerve.
23. Branches of the radial nerve, functional loss of the radial nerve.
24. Skin innervation of the upper limb.
25. Axillary fossa, triangular and quadrangular axillary spaces.
26. Sectional anatomy of the arm: fascial (osteofibrous) compartments, muscle groups, vessels and nerves. The cubital fossa.
27. Sectional anatomy of the forearm: fascial (osteofibrous) compartments, muscle groups, vessels and nerves. Supinator canal.
28. Topography of the volar and dorsal wrist regions: tendons, tendon sheaths, osteofibrous compartments, vessels and nerves. The carpal tunnel.
29. Dorsum of the hand. The anatomical snuffbox (Foveola radialis).
30. Palm of the hand: muscles, fasciae, compartments, vessels and nerves.

II. Anatomy of the lower limb

1. The bony pelvis: hip bone, sacrum and coccyx.
2. The structure and diameters of the bony pelvis.
3. The joints and ligaments of the pelvis. The statics and radiological anatomy of the pelvis.
4. The hip joint: gross and radiological anatomy, movements and the participating muscles.
5. The femur, tibia, fibula. Connections between tibia and fibula.
6. The knee joint: gross and radiological anatomy, movements and participating muscles.

7. The ankle (talocrural) joint: gross and radiological anatomy, movements and participating muscles.
8. Anatomy of the intertarsal joints and surgical lines of the foot. Movements of the foot: participating muscles.
9. The anatomy of the foot arches. Radiological anatomy of the foot.
10. Arteries of the lower limb, anastomoses between the branches of the femoral artery.
11. Venous and lymphatic drainage of the lower limb; clinical significance of the perforating veins.
12. Branches of the lumbar plexus.
13. Branches of the sacral plexus. The branches of the tibial and common fibular (peroneal) nerves.
14. Sensory innervation of the skin of the lower limb.
15. Muscles of the hip. Supra- and infrapiriform foramina.
16. Subinguinal hiatus. Femoral canal.
17. Femoral triangle, adductor canal, popliteal fossa.
18. Sectional anatomy of the thigh: fascial (osteofibrous) compartments, muscle groups, vessels and nerves.
19. Sectional anatomy of the leg (crus): fascial (osteofibrous) compartments, muscle groups, vessels and nerves.
20. Topography of the medial and lateral malleolar regions.
21. Dorsum of the foot: muscles, fasciae, tendons, tendon sheaths, vessels and nerves.
22. Sole (planta) of the foot: muscles, tendons, fasciae, compartments, vessels and nerves.

III. Anatomy of the trunk, the respiratory organ systems. Anatomy of the thoracic cavity

1. The vertebral column: gross anatomy, syndesmology and X-ray anatomy.
2. Functional anatomy of the atlantooccipital and atlantoaxial joints.
3. The bones and joints of the thorax. The movements of respiration.
4. The diaphragm.
5. The muscles and layers of the thoracic wall. The intercostal space.
6. The muscles of the posterior abdominal wall and the deep muscles of the back.
7. The surface projections of thoracic organs. Topography of the thoracic cavity, the divisions of the mediastinum.

8. The anatomy, blood supply and lymphatic drainage of the female breast.
9. The definition and structures of the superior mediastinum. Topography and developmental stages of the thymus.
10. Upper airways: functional anatomy of the nasal cavity and paranasal sinuses.
(without structures of the skull)
11. The cartilages, ligaments and cavity of the larynx. The anatomy of the hyoid bone.
Laryngoscopic image.
12. The muscles, blood supply and innervation of the larynx. The histology of the larynx.
13. The anatomy of the trachea. Organization of the bronchial system. The histological arrangement of the trachea, the bronchi and bronchioli.
14. Development of the respiratory system.
15. The gross anatomy and histology of the lungs, the bronchopulmonary segments and pleura. The innervation of the pleura.
16. The blood supply, innervation and lymphatic drainage of the lungs.
17. The anatomy of the pulmonary circulation, topography and branches of the pulmonary trunk.
18. The tributaries of the superior vena cava. The azygos-hemiazygos system. The lymphatic drainage of the thoracic cavity.
19. The topography of the vagus nerve in the thoracic cavity. The anatomy and function of the phrenic nerve.

IV. General histology and embryology

1. Cell surface specializations and intercellular junctions.
2. General description and types of covering epithelia.
3. General description and types of glandular epithelia.
4. Sensory epithelia: types and occurrence.
5. Cells of the connective tissues.
6. Ground substance and fibers of the connective tissues.
7. Types and fine structure of cartilage.
8. Structure of bone tissue: the cells and the extracellular matrix.
9. Histogenesis of bone. Types of ossification and regeneration of the bone.
10. Light- and electron microscopic structure of skeletal muscle, motor end plate.

11. Light- and electron microscopic structure and innervation of smooth muscle.
12. Light- and electron microscopic structure of cardiac muscle.
13. Light and electron microscopic structure of the neuron; electron microscopic structure of the interneuronal synapsis.
14. Light and electron microscopic structure of the glial cells.
15. General embryology I.: fertilisation, implantation of the embryo, gastrulation, development of the neuroendoderm. Differentiation of the intraembryonic mesoderm.
16. General embryology II.: Development of the amnion and yolk sac, placenta. Differentiation of the extraembryonic mesoderm.

31 August 2018