

Portal: Questions for final examination in anatomy (1. LF, Dentistry)

Skeleton and its connections

Structure and types of bones, bone marrow, innervation and blood supply of bone

Ossification, bone age, remodeling and growth of bone

Connection of bones, structures and types of joints, synovial joint

The osseous nasal cavity, relations to neighboring structures

Bony orbit - walls, relation to neighboring structures, passages

Connections of skull, structure and biomechanics of temporomandibular

Skull of neonate, its diameters compared to pelvic diameters, growth of skull

Vertebrae, vertebral column, connections, curvatures and motility

Skeleton of thorax, connections and motility of ribs, muscles of inspiration

Bony pelvis as a complex, connections, passages, diameters, planes, sexual differences

General features of striated muscle, its auxiliary structures, motor end plate, motor unit, muscle spindle, Golgi tendon organ, denervation atrophy

Muscles and fascias of the head

Muscles and fascias of the neck (draw transversal section of the neck)

Muscles and fascias of thorax

Muscles of abdominal wall, rectus muscle vagina (draw transversal section of the wall)

Pelvic floor muscles, ischioanal fossa, pelvic fascias (draw frontal section of pelvis)

Muscles and fascias of back

Gastrointestinal tract

Structure of the teeth, fixation, innervation and blood supply, gingivodental junction

Primary and permanent dentition formula, eruption, types of occlusion

Tongue, soft and hard palate, isthmus of fauces

Salivary glands, their description, syntopy, innervation

Pharynx – description, syntopy, blood supply, innervation, swallowing reflex

Nasal, palatine and lingual tonsils (Waldeyer circle)

Oesophagus – description, syntopy, narrowings, oesophageal varices

Stomach and lesser sac (omental bursa)

Duodenum, jejunum, ileum – structure, blood supply, innervation, motility, mesentery

The large intestine, structure, blood supply, innervation, motility

Vermiform appendix – structure, positions, abdominal wall projections

Pancreas – structure, syntopy, surgical approach, Langerhans islets

Liver – segments, syntopy (draw scheme of visceral surface)

Liver - structure, nutritional and portal vascular bed, intrahepatic bile ducts

Gallbladder and extrahepatic bile ducts(draw scheme), hepatoduodenal ligament

Rectum and anal canal, syntopy (draw frontal and sagittal sections), vascular supply, sphincters and their innervation, mechanism of continence

Peritoneum - parietal and visceral, greater and lesser omentum, recesses of peritoneum

Respiratory system

Nasal cavity, choanae, paranasal sinuses and their syntopy, vascular and nerve supply

Larynx (draw frontal section) - cartilages, ligaments, joints, muscles, coniotomy (cricothyrotomy)

Larynx - position and syntopy, vascular and nerve supply, (draw laryngoscopic view of inlet), laryngospasm

Trachea and bronchi, bronchial tree - description (draw scheme), structure, syntopy, tracheotomy

Lungs - description, syntopy, borders and projection onto thoracic wall, vascular and nerve supply, lymphatics

Lungs - bronchial and alveolar tree, bronchopulmonary segments

Pleura - visceral and parietal, borders of pleura, pleural dome and recesses, pneumothorax

Diaphragm and mechanics of respiration

Urinary and reproductive system

Kidney - description, syntopy, envelopes, fixation (draw scheme)

Structure of kidney - cortex, medulla, vascular supply, segments

Renal calices, pelvis, ureter - syntopy

Urinary bladder - structure and position, fixation and syntopy in male and female (draw scheme)

Male and female urethra - description, its course as basis of catheterisation

Testis and epididymis, scrotum, descent of testis

Vas (ductus) deferens, spermatic cord, seminal vesicles

Prostate - structure, topographic relations, prostatic urethra, ejaculatory ducts

Penis - structure (draw cross-section), vascular and nerve supply, mechanism of erection

Ovary - structure and position, vascular supply, ovarian cycle

Uterine (Fallopian) tube - structure, divisions, position, vascular supply

Uterus - structure, shape and divisions (draw scheme), vascular supply, lymphatics, endometrial cycle

Uterus - fixation, syntopy, position (draw scheme), its changes during pregnancy, broad ligament of uterus

Vagina - structure and syntopy (draw uterus and vagina in sagittal section)

External female genital organs, perineum

Heart

Heart - description, chambers, heart wall arrangement (draw section through ventricles)

Cardiac valves-structure and function, cardiac skeleton (draw skeleton scheme)

Conducting system of the heart- structure and function, heart innervation

Coronary arteries, coronarography, veins and nerves, lymphatics

Heart location and projection, X-ray (draw scheme of radiogram), auscultation heart points

Epicardium and pericardium - structure, syntopy, pericardial reflections around the roots of the great vessels

Systemic and pulmonary circulation, prenatal circulation

Arteries

Ascending aorta, aortic arch, thoracic aorta

Common carotid artery, internal carotid artery

External carotid artery

Maxillary artery

Subclavian artery

Abdominal aorta, position, topographic relations, parietal and paired visceral branches

Abdominal aorta, unpaired visceral branches and their clinically important anastomoses

External and internal iliac artery

Veins

Superior vena cava, brachiocephalic veins, subclavian vein, axillary vein

Internal jugular vein - course and extracranial tributaries

Cranial veins, sinus durae matris, intracranial tributaries of internal jugular vein

Inferior vena cava - course and tributaries, cavocaval anastomoses

Azygos and hemiazygos veins, vertebral venous plexuses

Portal vein - tributaries, portocaval (portosystemic) anastomosis and their clinical relevance

Iliac veins and their tributaries

Lymphatic system

Lymph node – structure and functional zones, sentinel lymph node, lymphatic tissue in organs

Main lymphatic ducts

Thymus - structure, position and syntopy, function

Spleen – structure, position, syntopy, vascular supply

Lymph nodes and collectors of head and neck

Lymph nodes and collectors of thorax

Lymph nodes and collectors of abdomen and pelvis

Central nervous system - CNS

Spinal cord, roots of spinal nerve, branching of spinal nerve (draw scheme), cauda equina

Spinal cord – structure of gray matter, cross section (draw scheme)

Motor pathways in spinal cord and motor deficiencies in spinal cord lesions

Sensory pathways in spinal cord and sensory loss in spinal cord lesions

Blood supply of spinal cord, meninges, cerebrospinal fluid and lumbar puncture

Medulla oblongata

Pons

Floor of rhomboid fossa and cranial nerve nuclei (draw scheme)

Reticular formation

Midbrain (mesencephalon) (draw cross section), cranial nerves III., IV., VI.

Cerebellum – structure, subdivision and functional organization

Afferent and efferent connections of cerebellum and their function

Diencephalon – structure, subdivision and functional organization

Thalamus – nuclei, connections and functional organization

Hypothalamus – subdivisions, connections and function

Hypophysis, hypothalamohypophyseal system

Basal ganglia, their circuits and function, parkinsonism

Main functional areas of cerebral cortex

Ventricular system of brain (draw scheme), circulation of liquor

Association and commissural fibers of hemisphere, internal capsule (draw scheme of tracts in internal capsule)

Brain vessels and meninges

Corticospinal (pyramidal) and corticonuclear tract

Dorsal column (lemniscal) system of general sensory tracts, proprioceptive and tactile sensation

Anterolateral system of sensitive spinal tracts – (spinothalamic, spinoreticular and spinotectal tracts), pain pathways

Auditory and vestibular pathway

Visual pathway and visual cortical areas

Olfactory and gustatory pathway, olfactory nerve

Limbic system

Neurotransmitters in the CNS and main brain chemical systems

Peripheral nervous system - PNS

General structure of the spinal nerve, perineurium, vertebromedullary topography, segmental innervation, radicular areas, dermatomes

Cervical plexus, supraclavicular portion of brachial plexus

Skin and motor innervation of head and neck

First and second branch of trigeminal nerve

Third branch of trigeminal nerve

Facial nerve, Bell's palsy

Glossopharyngeal nerve and vagus nerve

Accessory and hypoglossal nerves

General structure of autonomic nervous system

Cranial and sacral parasympathetic system

Cervical and thoracic sympathetic system

Abdominal and pelvic sympathetic system, prevertebral plexuses and ganglia

Sensory organs, skin, endocrine glands

Eye (draw sagittal section), cornea, sclera and vitreous body

Choroid, iris, ciliary body, eye chambers, circulation of aqueous humor, glaucoma

Retina (draw schema of eye fundus), detachment of retina; lens, accommodation, cataract

Blood supply and innervation of eye, corneal reflex, pupillary light reflex

Eyelids, conjunctiva, lacrimal apparatus

Extraocular muscles, soft tissue in orbit

External acoustic meatus and tympanic membrane (draw otoscopic view), paracentesis

Tympanic cavity, auditory ossicles, auditory tube

Bony and membrane labyrinths (draw cross section of bony cochlea and cochlear duct) vestibulocochlear nerve, nystagmus

Skin – epidermis and dermis, hair, nails, glands, sensory endings

Mamma - description and structure, blood supply and innervation, lymphatics

Thyroid and parathyroid glands – structure, function, topography, blood supply

Suprarenal gland – structure, topography (draw schema), function, blood supply, paraganglia

Regional Anatomy

Layers of scalp, superficial regions of the face

Infratemporal fossa and parapharyngeal space

External and internal cranial base - openings for vessels and nerves

Submandibular triangle, carotid triangle (draw schema)

Lateral neck region, scalenic fissure

Mediastinum – division, borders (draw transverse section)

Topography of chest wall, surface projections of heart, lungs and pleura

Topography of abdominal wall, blood supply, innervation and surface projections of abdominal organs

Inguinal region, inguinal canal, hernias (draw schema of inguinal canal)

Topography of supramesocolic part of peritoneal cavity (draw transverse section through lesser sac)

Topography of duodenum and pancreas (draw schema)

Topography of inframesocolic part of peritoneal cavity

Retroperitoneal space, topography of its organs and main vessels and nerves

Topographic anatomy of male pelvis (draw sagittal section), importance of rectal exam

Topographic anatomy of the female pelvis (draw sagittal section)

Perineal region (draw schema), ischioanal fossa (draw frontal section of pelvis)

Topography of spinal canal (draw transverse section), anatomic backgrounds of spinal tap (lumbar puncture) and epidural anesthesia