

GENERAL SURGERY STATE EXAM

Faculty of Medicine Masaryk University Brno

THE LIST OF THE QUESTIONS

Arrangement 2023/24

- I GENERAL SURGERY Range A, B, C
- II TRAUMATOLOGY and ORTHOPAEDICS
- III NEUROSURGERY, CARDIAC SURGERY, TRANSPLANTATION SURGERY
- IV UROLOGY
- V PAEDIATRIC SURGERY

The choice of the questions and the examination

Five questions together are determined at random choice one by one from the spheres I to V through IT program or by the decision of the examination board. The student prepares the answers to all questions. State exam starts as a rule with spoken reply to the question on general surgery. It proceeds with answers to other two chosen questions setting down by the examination board. The exam continues eventually with fourth and fifth questions according the knowledge proved.

I GENERAL SURGERY

Range A

- 1 Asepsis, antisepsis, sterilisation, and disinfection
- 2 Subjective and objective symptoms of acute abdominal events
- 3 The most frequent mistakes in the diagnostics of acute abdominal episodes and main causes of late admission to hospital
- 4 Acute painful syndrome of the epigastrium
- 5 Hernias of the anterior abdominal wall
- 6 Abdominal hernias and their complications
- 7 Acute appendicitis
- 8 Appendicitis in childhood, old age, gravidity, and puerperium
- 9 Differential diagnostics of acute appendicitis
- 10 Complications of acute appendicitis
- 11 Haemorrhoids, anal fissure
- 12 Anorectal fistulas and abscesses
- 13 Prolapse of the anus and rectum
- 14 Sacrococcygeal pilonidal sinus
- 15 Classification of intestinal obstructions
- 16 Pathophysiology of the ileus
- 17 Mechanical ileus
- 18 Neurogenic and vascular ileus
- 19 Inflammations and calculi in the biliary tract
- 20 Obstructive jaundice
- 21 Acute pancreatitis
- 22 Cysts and pseudocysts of the pancreas
- 23 Tumours of the pancreas

- 24 Chronic pancreatitis and its surgical treatment
- 25 Surgery of the liver
- 26 Tumours of the stomach
- 27 Tumours of the large and small bowel
- 28 Surgical treatment of colon inflammations
- 29 Surgical inflammations of the small intestine
- 30 Rare abdominal hernias, internal hernias
- 31 Ulcer disease of the stomach and duodenum
- 32 Complications of the gastroduodenal ulcer disease
- 33 Acute painful syndrome of the left hypogastrium
- 34 Diverticulosis of the gastrointestinal tract

Range B

- 1 Cervical cysts and fistulas
- 2 Goitre
- 3 Thoracic outlet syndrome
- 4 Inflammations in the breast
- 5 Breast cancer
- 6 Gynaecomastia
- 7 Pneumothorax and haemothorax
- 8 Acute mediastinitis
- 9 Pleural empyema
- 10 Pulmonary abscess
- 11 Lung cancer
- 12 Injuries to the thorax
- 13 Diaphragmatic hernia; paralysis of the diaphragm
- 14 Tumours of the mediastinum
- 15 Surgery of the oesophagus
- 16 Pylorospasm, cardiospasm
- 17 Surgery of the spleen
- 18 Varices of lower extremities
- 19 Acute obstruction of peripheral arteries
- 20 Injuries to the arteries
- 21 Chronic arterial occlusions
- 22 Arterial aneurysms
- 23 Venous thrombosis
- 24 Inflammations in the retroperitoneum
- 25 Injuries to the stomach, small and large intestines

Range C

- 1 Acute bleeding into the gastrointestinal tract
- 2 Haemoperitoneal syndrome
- 3 Acute peritonitis
- 4 Localised peritonitis
- 5 Superior vena cava syndrome
- 6 Principles of minimally invasive surgery - laparoscopic, thoracoscopic and arthroscopic
- 7 Management in the unconscious patient
- 8 Postoperative complications
- 9 Blood transfusion and its complications
- 10 Resuscitation of arrests of breathing and circulation
- 11 Surgical infection

- 12 The embolism of all kinds
- 13 Shocks: haemorrhagic, burn, traumatic, anaphylactic, septic
- 14 Disorders of the internal environment, including acid-base balance in surgery
- 15 General anaesthesia
- 16 Local anaesthesia
- 17 Complications of anaesthesia
- 18 Drowning and hanging
- 19 Thermal injuries
- 20 Injuries by electric current
- 21 Pigmented naevi, malignant melanoma
- 22 Plastic surgeries of the skin and transplantations
- 23 Suppurative diseases of the fingers and hand
- 24 Dupuytren's contracture
- 25 Acute and chronic lymphoedema
- 26 Injuries to the abdomen

II TRAUMATOLOGY and ORTHOPAEDICS

- 1 Injuries to the soft knee
- 2 Amputation of the extremities and limb prostheses
- 3 Fractures of the upper end of femur
- 4 Vertebral tumours
- 5 Injuries to tendons
- 6 Fractures of the pelvis and their complications
- 7 Traumatic luxations in the hip joint
- 8 Fractures of the proximal end of humerus
- 9 Osteomyelitides
- 10 Scalping
- 11 Injuries to the neck
- 12 Loss injuries to the hand
- 13 Fractures of the ribs and sternum
- 14 Suppurative inflammations of the joints
- 15 Conservative and surgical treatment of fractures
- 16 Intervertebral disc protrusions
- 17 Fractures of the humeral diaphysis
- 18 Fractures of bones of the forearm
- 19 Luxations in the shoulder joint
- 20 Malleolar fractures
- 21 Fractures of the talus and foot
- 22 Fractures in the elbow joint region
- 23 Luxations in the elbow joint
- 24 Fractures in the knee joint region
- 25 Fractures of bones of the carpus and hand
- 26 Fractures and luxations in the regions of the clavicle and scapula
- 27 Fractures of crural bones
- 28 Complications and consequences of fractures
- 29 Healing of fractures and its disorders
- 30 Non-specific inflammation of a bone, specific inflammations of bones and joints
- 31 Orthopaedic treatment of degenerative and rheumatic diseases
- 32 Bone tumours – classification, diagnostics, principles of treatment
- 33 Congenital defects of the musculoskeletal apparatus
- 34 Orthopaedic diseases of the hip joint in childhood

- 35 Congenital abnormalities of the feet
- 36 Scoliosis and other backbone deformities
- 37 Pain in the back – differential diagnostics
- 38 Examination methods in orthopaedics and traumatology
- 39 Principles of treatment of an injured patient (first aid in fractures)
- 40 Surgical treatment of fractures, principles of osteosynthesis
- 41 Complications in the treatment of fractures
- 42 Classification, healing of fractures, fractures in children and their complications
- 43 Plastering and dressing techniques in traumatology; extensions
- 44 Open fractures – principles of treatment, complications
- 45 Principles of rehabilitation in treating injuries to the musculoskeletal apparatus; evaluation of long-term prognosis and disability, principles of orthopaedic prosthetics
- 46 Injuries to the spine
- 47 Injuries in the region of the shoulder joint
- 48 Injuries in the regions of the arm and elbow; supracondylar fracture in children
- 49 Fractures of the forearm, wrist, and hand
- 50 Injuries to the pelvis and acetabulum
- 51 Fractures of the femur
- 52 Injuries to the soft knee
- 53 Crural fractures and the compartment syndrome
- 54 Injuries in the regions of the ankle and foot
- 55 Aseptic necroses of bones, enthesopathies, and inflammations of tendons
- 56 Injuries to the joints
- 57 Tendovaginitis and bursitis
- 58 Geriatric traumatology
- 59 Injuries to the backbone
- 60 Neuromuscular diseases - cerebral palsy, polio, postpartum lesions, peripheral nervecompression
- 61 Multi-level degenerative diseases of the spine – open surgery anterior and posterior, combined interventions

III NEUROSURGERY, CARDIAC SURGERY, TRANSPLANTATION SURGERY

- 1 Elevated intracranial pressure: pathophysiology, diagnosis, therapy
- 2 Concussion, cerebral contusion and diffuse axonal injury: diagnosis, therapy
- 3 Epidural and subdural (acute and chronic) hematoma: diagnosis, therapy
- 4 Skull fractures and basal skull fractures: complications, diagnosis, therapy
- 5 Penetrating brain injury /stabbing, slashing and gunshot wounds/
- 6 Cerebrovascular diseases - brain ischemia: diagnosis, therapy and surgical treatment options
- 7 Cerebrovascular diseases - arteriovenous malformation, cavernoma: diagnosis, therapy
- 8 Cerebrovascular diseases - subarachnoid hemorrhage, aneurysm: diagnosis, therapy
- 9 Spontaneous intracerebral hemorrhage: diagnosis, therapy
- 10 Primary intra-axial brain tumors (gliomas- Low-grade gliomas and High-grade gliomas): diagnosis, therapy
- 11 Neuro-oncology - multimodal surgical treatment: imaging, intraoperative methods and AWAKE craniotomy
- 12 Radiotherapy for brain tumors: stereotactic radiotherapy (SRT) and stereotactic radiosurgery (SRS)
- 13 Primary extra-axial brain tumors: diagnosis, therapy
- 14 Secondary brain tumors (metastases): diagnosis, therapy
- 15 Primary and secondary intraspinal tumors: diagnosis, therapy

- 16 Degenerative diseases of the cervical spine: diagnosis, therapy
- 17 Degenerative diseases of the lumbar spine: diagnosis, therapy
- 18 Diseases of peripheral nerves - trauma, tumors: diagnosis, therapy
- 19 Diseases of peripheral nerves - the most common entrapment neuropathies: diagnosis, therapy
- 20 Brain infections and spine infections (abscess, empyema, discitis): diagnosis, therapy
- 21 Hydrocephalus - pathophysiology, diagnosis, therapy, endoscopy
- 22 Normal pressure hydrocephalus and idiopathic intracranial hypertension: diagnosis, therapy
- 23 Functional neurosurgery – neuromodulation (Deep-brain stimulation – (DBS), Spinal cord stimulation (SCS), Peripheral nerve stimulation (PNS)), epilepsy surgery, stereotaxis
- 24 Failed Back Surgery Syndrome (FBSS) - diagnosis, therapy
- 25 Congenital anomalies of the nervous system (encephalocele, myelomeningocele, craniosynostosis): diagnosis, therapy
- 26 Surgical treatment of congenital heart anomalies in children and adults
- 27 Surgical treatment of valvular diseases – aortal, mitral, tricuspidal
- 28 Surgical treatment of ischemic heart disease and its complications
- 29 Surgical treatment of diseased thoracic aorta
- 30 Injuries to the heart and thoracic aorta; tumours of the heart
- 31 Mechanical cardiac support, extracorporeal circulation
- 32 Transplantation of the kidney, heart, liver
- 33 Organ donation

IV UROLOGY

- 1 Examination methods in urology – clinical, laboratory, endoscopic, and diagnostic imaging
- 2 Haematuria; urinary retention; anuria
- 3 Acute episodes in urology
- 4 Non-specific inflammations of the urinary tract
- 5 Tuberculosis of the uropoietic system
- 6 Renal colic
- 7 Urolithiasis – diagnostics and endoscopic treatment, extracorporeal lithotripsy, metaphylaxis
- 8 Torsion of the testicle
- 9 Phimosi, hydrocele, varicocele
- 10 Epididymitis, orchitis
- 11 Prostatitis
- 12 Obstruction of the urinary tract; hydronephrosis
- 13 Injuries to the urinary system - kidney, ureter, urinary bladder, urethra
- 14 Benign prostatic hyperplasia - aetiology, epidemiology, diagnostics, treatment
- 15 Prostate cancer a)prostate-limited tumours; b) advanced disease
- 16 Tumours of the testicle
- 17 Tumours of the kidneys
- 18 Tumours of the urinary bladder
- 19 Tumours of the penis
- 20 Tumours of the retroperitoneum
- 21 Cystic disease of the kidneys
- 22 Urinary incontinence – classification, diagnostics, and treatment
- 23 Surgery of the adrenal glands
- 24 Infertility in the male – aetiology, epidemiology, diagnostics, assisted reproduction methods possibilities of surgical treatment
- 25 Sexual dysfunctions in the male (erectile dysfunction, priapism, Peyronie's disease)
- 26 Possibilities of urinary drainage
- 27 Vesicoureteral reflux

V PAEDIATRIC SURGERY

- 1 Care in the newborn
- 2 Non-invasive examination methods in paediatric surgery
- 3 Acute appendicitis in child age
- 4 Gastroesophageal reflux and oesophageal achalasia in child age
- 5 Diaphragmatic hernias in child age
- 6 Hirschsprung's disease in child age
- 7 Haemorrhage into the gastrointestinal system in child age
- 8 Congenital developmental defects in child age
- 9 Congenital anorectal anomalies
- 10 Chest deformities in child age
- 11 Defects of the abdominal wall in child age
- 12 Oesophageal atresia in child age
- 13 Anorectal malformations in child age
- 14 Biliary atresia in child age
- 15 Specificities of fractures in children
- 16 Pyloric stenosis in child age
- 17 Necrotising enterocolitis in child age
- 18 Non-specific intestinal inflammations in child age
- 19 Intestinal polyps in child age
- 20 Tumours of the liver in child age
- 21 Tumours of the urogenital tract in child age
- 22 An undescended testis, phimosis, paraphimosis in child age
- 23 Fractures of the humerus and clavicle in child age
- 24 Fractures of the forearm and hand in child age
- 25 Fractures of the ribs and sternum; pneumothorax in child age
- 26 Fractures of the vertebrae and pelvis in child age
- 27 Fractures of the femur in child age
- 28 Injuries to the knee joint in child age
- 29 Crural and foot fractures in child age
- 30 Injuries to organs of the abdominal cavity in child age
- 31 Periannular subluxation of radial head – painful pronation
- 32 Urogenital developmental anomalies

*Edited through linking of the Examination Boards
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