

**CLINICAL ANATOMY AND OPERATIVE SURGERY
OF THE HEAD, NECK, AND CHEST**

5717 Methodical instructions





Ministry of Education and Science of Ukraine
Ministry of Public Health of Ukraine
Sumy State University
Educational and Scientific Medical Institute

5717 Methodical instructions
for practical lessons
on the topic «*Clinical Anatomy and Operative Surgery
of the Head, Neck, and Chest*»
in the discipline «**Clinical Anatomy and Operative Surgery**»
for students of speciality 222 «*Medicine*»
full-time form of education

Sumy
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Department of Morphology
Educational and Scientific Medical Institute

Practical training № 1

Topic. Surgeon armamentarium. Separation and suturing of soft tissues. Clinical anatomy and operative surgery of the fronto-parieto-occipital region and the internal cranial base.

The purpose of the lesson

1. Study the general surgeon armamentarium: tools for tissue dissection and suturing, hemostatic and auxiliary surgical instruments.
2. Learn the methods of pre-surgical hand preparation: Spasokukotskyi – Kochergin method, Furbringer method, and hand scrubbing with performic acid-based solution (Pervomur, C4).
3. Learn how to prepare an operating field.
4. Practice the local infiltration (creeping tight infiltrate method) and conduction anesthesia techniques on a physical body.
5. Learn the technique of surgical knots tying, layer-by-layer dissection and suturing of soft tissues, temporary and permanent bleeding control.
6. Study the topographic anatomy of arteries, veins, and nerves in the cranial vault area.
7. Learn the technique of initial surgical debridement of craniocerebral traumas.
8. Learn the technique for bleeding control from the vessels of the subcutaneous tissue, cranial vault, meninges, and venous sinuses.
9. Study the surgical anatomy of the internal cranial base, meninges, intermeningeal spaces, and CSF flow pathways.
10. Justify the clinical presentation of the basilar skull fractures.

Control questions

1. Surgical anatomy of the fronto-parieto-occipital region: boundaries, layer-by-layer structure, blood supply, innervation, lymphatic efflux.
2. The role of venous outflow pathways in the spread of infection associated with traumas and inflammatory diseases of the soft tissues of the fronto-parieto-occipital region.
3. Surgical anatomy of the meninges, intermeningeal spaces, venous sinuses, and CSF flow pathways.
4. Blood supply and innervation of the dura mater.
5. Blood supply to the brain.
6. Surgical anatomy of the internal cranial base, topographic anatomy of cranial nerves.
7. Initial surgical debridement of penetrating and non-penetrating craniocerebral traumas: local or general anesthesia, washing, cleaning, tissue dissection and wound revision, debriding, bleeding control, restoration of regular anatomical connections of the tissues by layered closure.
8. Methods for control of bleeding from diploic veins of cranial bones, venous sinuses of the dura mater, and cerebral vessels.
9. Clinical manifestations of the anterior, middle, and posterior cranial fossa fractures.

Practical skills

1. Types of ligatures; demonstrate the technique of knot tying.
2. Demonstrate the technique of skin suturing.
3. Demonstrate the technique of muscle suturing.
4. Demonstrate the technique of aponeurosis suturing.
5. Prepare the individual instrument table of a surgical technician for the wound's initial surgical debridement.

6. The staff content, arrangement, and operating procedures of the surgical team (surgeon, assistant surgeon, surgical technician, anesthesiologist, nurse anesthetist, nurse).
7. Classify general-purpose instruments.
8. Prepare the operating field for surgery.
9. Demonstrate the infiltration anesthesia technique.
10. Demonstrate the technique of dissection of skin, fascia, aponeuroses, and muscles.
11. Demonstrate the technique of vessel ligation.
12. Perform initial surgical debridement of a penetrating head injury caused by a depressed skull fracture.
13. Perform temporary and permanent bleeding control in the skin wound of the fronto-parieto-occipital region.
14. Perform the bone injury debridement and stop the bleeding.
15. Perform the revision of the penetrating injury of the cranial vault.
16. Control the bleeding from the vessels of the dura mater and pia mater.
17. Control the bleeding from the superior sagittal sinus of the dura mater.
18. Demonstrate the technique of removing small fragments of the inner table of the skull, blood clots, and brain detritus.
19. Prepare surgical instruments for initial surgical debridement of a penetrating head injury.

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Practical training № 2

Topic. Clinical anatomy and operative surgery of the temporal region and the area of the mastoid process.

The purpose of the lesson

1. Study the layer-by-layer structure of the temporal region.
2. Study the layer-by-layer structure of the mastoid process.
3. Learn the technique of osteoplastic trepanation and decompressive craniectomy.
4. Master the technique of mastoidectomy.

Control questions

1. Clinical anatomy of the temporal region: boundaries, layer-by-layer structure, blood supply, innervation.
2. Surgical anatomy of the middle meningeal artery.
3. The scheme of craniocerebral topographic anatomy by Kronlein.
4. Osteoplastic trepanation by Olivecron: indications, technique.
5. Decompressive craniectomy by Cushing: indications, technique.
6. Clinical anatomy of the mastoid process.
7. Boundaries of Chipault trepanation triangle.
8. Mastoidectomy: indications, technique.
9. Anatomical structures bordering Chipault trepanation triangle.
10. Surgical instruments for particular purposes.

Practical skills

1. Draw the scheme of craniocerebral topographic anatomy by Kronlein.
2. Pick up the instruments for osteoplastic trepanation.
3. Perform the osteoplastic trepanation on a physical body.
4. Show the boundaries of the Chipault trepanation triangle.

5. Perform mastoidectomy on a physical body.

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Practical training № 3

Topic. Clinical anatomy and operative surgery of the lateral part of the face.

Purpose of the lesson

1. Study the blood supply of the lateral part of the face.
2. Learn the topographic anatomy of the parotid gland and branches of the facial nerve.
3. Learn the technique of dissection and drainage of the phlegmons in the lateral part of the face or pterygomandibular space.
4. Learn the technique of dissection and drainage of the parotid gland.
5. Learn the technique of dissection and drainage of the parapharyngeal space.
6. Learn the technique of dissection of the retropharyngeal abscess.
7. Learn how to make incisions for drainage in suppurative parotitis.
8. Learn how to perform topical diagnosis of facial nerve injuries.
9. Learn the technique of neurosurgical and myoplastic operations in facial nerve paralysis.
10. Study the pathways of spreading of purulent inflammatory processes of the face.
11. Learn how to perform extra-oral maxillary and mandibular nerve blocks.
12. Master the surgery techniques for chronic frontal sinusitis and maxillary sinusitis.

Control questions

1. Clinical anatomy of the buccal region: boundaries, blood supply, lymphatic and venous outflow pathways – the role of the venous network in spreading inflammation.
2. Clinical anatomy of the parotid-masseteric region. Surgical anatomy of the parotid glands.
3. Surgical anatomy of the facial nerve. Topical diagnosis of facial nerve injuries.
4. Means of facial muscle neurotization in facial nerve injuries.
5. Surgical treatment of suppurative parotitis.
6. Clinical anatomy of the deep facial region. Surgical anatomy of the temporoptyergoid and interptyergoid spaces.
7. Surgical anatomy of the pterygopalatine fossa.
8. Surgical anatomy of peripharyngeal and retropharyngeal spaces. Means of drainage.
9. Pathways of spreading purulent inflammatory processes of the face; making incisions for drainage.
10. Technique of extra-oral maxillary and mandibular nerve block by S. N. Weisblat.
11. Surgical anatomy of the frontal sinus. Jansen–Ritter method.
12. Surgical anatomy of the maxillary sinus. Caldwell-Luc–Ivanov method.

Practical skills

1. Show on the physical body:
 - facial artery and facial vein;
 - the excretory duct of the parotid gland and its projection in the Tsakadze triangle;
 - branches of the facial nerve;
 - vessels and nerves passing through the parotid gland;
 - projection of emerging of the infraorbital and mental neurovascular bundles;

- maxillary artery and its branches;
 - branches of the mandibular nerve.
2. Make an incision for drainage in suppurative parotitis.
 3. Make an incision for drainage of the peripharyngeal space.
 4. Perform extra-oral maxillary and mandibular nerve block by S. N. Weisblat.
 5. Make a frontal sinus incision on a physical body by Jansen–Ritter method.
 6. Make a maxillary sinus incision on a physical body by Caldwell-Luc method.

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Practical training № 4

Topic. Clinical anatomy and operative surgery of the submandibular and carotid triangles of the neck.

Purpose of the lesson

1. Study the layer-by-layer structure of the neck in the area of submandibular and carotid triangles.
2. Be able to justify and make incisions on a physical body for draining phlegmons and neck abscesses.
3. Learn the surgical anatomy of the submandibular salivary gland.

Control questions

1. Regions and triangles of the neck.
2. Surgical anatomy of the cervical fascia by V. N. Shevkunenko.
3. Tissue spaces of the neck and incisions for their drainage.
4. Clinical anatomy of the submandibular triangle.
5. Surgical anatomy of the submandibular salivary gland.
6. Clinical anatomy of the carotid triangle.
7. Surgical anatomy of the central neurovascular bundle of the neck.
8. Surgical anatomy of the carotid sinus reflex area.

Practical skills

Show on the physical body:

- triangles of the neck;
- interfascial spaces of the neck;
- incision lines for draining interfascial phlegmons of the neck;
- submandibular duct (the Wharton's duct);
- lingual nerve and hypoglossal nerve;
- the Pirogov triangle;
- branches of the external carotid artery;

- ansa cervicalis and its innervation area;
- components of the major neurovascular bundle of the neck.

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Practical training № 5

Topic. Clinical anatomy and operative surgery of the sternocleidomastoid region, lateral triangle, and organs of the neck.

Purpose of the lesson

1. Learn the topographic anatomy of the sternocleidomastoid region.
2. Learn the topographic anatomy of the lateral triangle.
3. Learn how to perform surgical approaches to the neck organs, the main neurovascular bundle of the neck, and the thoracic lymph duct.
4. Perform the vago-sympathetic block by Vishnevskyi.
5. Perform cervical plexus block anesthesia.
6. Perform the brachial plexus block by Kulenkampff.
7. Learn the stages of surgery for thoracic outlet syndrome in the interscalene space.
8. Study the surgical anatomy of the neck organs.
9. Learn the techniques of tracheotomy and cricothyrotomy.
10. Learn the technique of the subtotal subfascial resection of the thyroid gland by Mykolaiev, modified by Bondarenko.
11. Gain surgical access to the cervical esophagus.
12. Learn the technique of esophagotomy.
13. Learn the technique of exposing the common carotid artery and external carotid artery.
14. Learn the technique of carotid thrombectomy.
15. Study the collateral circulation in internal carotid artery occlusion.

Control questions

1. Clinical anatomy of the sternocleidomastoid region.
2. Surgical anatomy of the central neurovascular bundle of the neck in the upper, middle, and lower parts by B. V. Petrovskyi.

3. Surgical anatomy of the cervical plexus.
4. Cervical plexus block anesthesia: indications, technique.
5. Surgical anatomy of the cervical sympathetic trunk by I. A. Ageienko.
6. The vagosympathetic block by Vishnevskiy: indications, technique.
7. Clinical anatomy of the antescalene space (spatium antescalenum).
8. Clinical anatomy of the scalenovertebral triangle (trigonum scalenovertebrale).
9. Surgical anatomy of the cervical part of the thoracic lymph duct.
10. Thoracic lymph duct drainage: indications, technique.
11. Clinical anatomy of the lateral triangle of the neck.
12. Clinical anatomy of the interscalene space.
13. Surgical treatment of scalenus syndrome (Naffziger syndrome).
11. Surgical anatomy of the brachial plexus and its supraclavicular branches.
12. Kulenkampff brachial plexus block: indications, technique.
13. Surgical anatomy of the thyroid gland and parathyroid glands.
14. The subtotal subfascial resection of the thyroid gland by Mykolaiev, modified by Bondarenko: indications, technique.
15. Surgical anatomy of the larynx.
16. Surgical anatomy of the trachea.
17. Upper and lower tracheotomy: indications, technique, complications.
18. Microtracheostomy: indications, technique.
19. Conicocentesis: indications, technique.
20. Cricothyrotomy: indications, technique.
21. Surgical anatomy of the pharynx.
22. Drainage of the retropharyngeal space.

23. Surgical anatomy of the cervical esophagus.
24. Esophagotomy: indications, technique.
25. Exposure of the common carotid artery and external carotid artery: indications, technique.
26. Collateral circulation in internal carotid artery occlusion.
27. Carotid thrombectomy: indications, technique.

Practical skills

1. Show on the physical body:
 - common carotid artery, internal jugular vein, and vagus nerve;
 - cervical plexus branches;
 - cervical sympathetic trunk;
 - branches originating from the subclavian artery in a scaleno-vertebral triangle;
 - antescalene space (spatium antescalenum) and its contents: internal jugular vein, subclavian vein, venous angle, external jugular vein, thoracic duct, right lymphatic duct, phrenic nerve, suprascapular artery, superficial cervical artery;
 - interscalene space and its contents;
 - thyroid gland;
 - superior thyroid artery;
 - inferior thyroid artery;
 - thyroidea ima artery;
 - superior laryngeal nerve;
 - recurrent laryngeal nerve;
 - cervical esophagus;
 - the cervical trachea.
2. Perform on the physical body:
 - the brachial plexus block by Kulenkampff;
 - cervical plexus block;
 - the vagosympathetic block by Vishnevskiy;
 - upper tracheotomy;

- lower tracheotomy;
- cricothyrotomy;
- conicocentesis;
- surgical access to the cervical esophagus;
- exposure and ligation of the external carotid artery;

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Practical training № 6

Topic. Clinical anatomy and operative surgery of the subclavian region, mammary gland, thoracic wall, pleura, and diaphragm.

Purpose of the lesson

1. Learn the technique of subclavian vein puncture and catheterization by Seldinger.
2. Learn the technique of subclavian artery exposure.
3. Learn the technique of surgical treatment of suppurative mastitis.
4. Learn the technique of surgical treatment of benign and malignant breast tumors.
5. Learn how to make an incision for subpectoral phlegmon drainage.
6. Learn the technique of pleural puncture.
7. Learn the technique of rib resection.
8. Learn the technique of initial surgical debridement of penetrating chest traumas.
9. Learn how to perform a Nissen fundoplication.
10. Learn the technique of mammary coronary artery anastomosis.
11. Learn the technique of intercostal nerve block.

Control questions

1. Clinical anatomy of the subclavian region. Surgical anatomy of the superficial subpectoral space and deep subpectoral space: contents and incisions for drainage.
2. Surgical anatomy of the clavipectoral triangle and pectoral triangle. Pectoralis minor syndrome.
3. Surgical anatomy of the subclavian vein. Paget-Schroetter syndrome. Subclavian vein exposure. Thrombectomy. Venoplasty.

4. Seldinger technique of subclavian vein puncture and catheterization.
5. Exposure of the subclavian artery by Dzhanlidze and Petrovskyi. Pathways of collateral circulation after subclavian artery ligation.
6. Surgical anatomy of the mammary gland.
7. Surgical treatment of suppurative mastitis and benign mammary tumors.
8. Mastectomy by Halsted–Meyer and Patey–Dyson: indications, technique.
9. Surgical anatomy of the intercostal space.
10. Intercostal nerve block: indications, technique.
11. Surgical anatomy of the internal thoracic artery. Mammary coronary artery anastomosis: indications, technique.
12. Surgical anatomy of the pleura and pleural recesses.
13. Pleural puncture: indications, technique.
14. Rib resection: indications, technique.
15. Initial surgical debridement of penetrating chest traumas.
16. Surgical anatomy of the diaphragm. Hiatal hernias. Nissen fundoplication.
17. Surgical instruments used in thoracic surgery.

Practical skills

1. Show on the physical body:
 - axillary vein, subclavian vein;
 - axillary artery, brachial plexus, and its branches;
 - intercostal vein, intercostal artery, and intercostal nerve;
 - internal thoracic artery and its branches.
2. Perform on the physical body:
 - an incision for subpectoral phlegmon drainage;
 - incisions for suppurative mastitis surgery;
 - exposure of the subclavian artery using Dzhanlidze arciform incision or Petrovskyi T-shaped incision;

- show possible collateral circulation pathways after subclavian artery ligation;
- mastectomy by Halsted–Meyer and Patey;
- Seldinger technique of subclavian vein puncture and catheterization;
- pleural puncture;
- rib resection;
- intercostal nerve block;
- initial surgical debridement of penetrating chest trauma with a lung injury;
- Nissen fundoplication;
- sagittal diaphragmotomy.

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Practical training № 7

Topic. Clinical anatomy and operative surgery of the superior mediastinum, pericardium, heart, and lungs.

Purpose of the lesson

1. Study the topographic anatomy of organs, vessels, and nerves of the superior mediastinum.
2. Study the mediastinal tissue planes.
3. Understand the pathways of the purulent process spreading in the mediastinum and learn the methods of its drainage.
4. Be able to gain surgical access to the lungs.
5. Master the techniques of pneumonectomy, lung lobectomy, and lung segmentectomy.
6. Master the technique of pericardiocentesis.
7. Be able to gain surgical access to the heart.
8. Learn the technique of initial surgical debridement of chest traumas with cardiac injury.
9. Master the technique of surgical treatment of patent ductus arteriosus and aortic coarctation.
10. Learn the technique of mitral commissurotomy.
11. Learn modern methods of surgical treatment of coronary heart disease.
12. Master the technique of coronary artery bypass surgery.

Control questions

1. Mediastinum and its parts.
2. Surgical anatomy of organs, vessels, and nerves of the superior mediastinum (thymus, brachiocephalic veins, superior vena cava, aortic arch, brachiocephalic trunk, left common carotid artery, left subclavian artery, phrenic nerve, and vagus nerve).
3. Mediastinal tissue planes.

4. Pathways of purulent process spreading in the mediastinum and the methods of its drainage.
5. Surgical anatomy of the lungs.
6. Surgical approaches to the lungs and mediastinal organs.
7. Pneumonectomy, lung lobectomy, and lung segmentectomy: indications, technique.
8. Surgical anatomy of the pericardium.
9. Pericardiocentesis: indications, technique.
10. Pericardiectomy: indications, technique.
11. Surgical anatomy of the heart.
12. Surgical accesses to the heart.
13. Initial surgical debridement of chest traumas with cardiac injury.
14. Surgical treatment of patent ductus arteriosus.
15. Surgical treatment of aortic coarctation.
16. Mitral commissurotomy: indications, technique.
17. Modern methods of surgical treatment of coronary heart disease: coronary artery bypass surgery, mammary coronary artery anastomosis, coronary balloon angioplasty, and periaortic plexectomy.
18. Surgical instruments for particular purposes.

Practical skills

1. Show on the physical body:
 - Superior mediastinum contents – brachiocephalic veins, superior vena cava, aortic arch, brachiocephalic trunk, left common carotid artery, left subclavian artery, phrenic nerve, and vagus nerve.
 - internal thoracic artery and its branches;
 - left pulmonary artery, left main (primary) bronchus, left pulmonary veins;
 - right main (primary) bronchus, right pulmonary artery, right pulmonary veins;
 - right coronary artery and its branches;
 - left coronary artery and its branches;

- transverse pericardial sinus;
 - oblique pericardial sinus.
2. Perform on the physical body:
- cervical mediastinotomy;
 - posterior extrapleural mediastinotomy by Nasilov;
 - transperitoneal mediastinotomy by Savinykh–Rozanov;
 - anterolateral thoracotomy, posterolateral thoracotomy, lateral thoracotomy;
 - pneumonectomy;
 - lung lobectomy;
 - lung segmentectomy;
 - puncture of the pericardium (pericardiocentesis), according to Larrey and Marfan;
 - initial surgical debridement of chest traumas with cardiac injury;
 - surgical treatment of patent ductus arteriosus;
 - mitral commissurotomy.

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Practical training № 8

Topic. Clinical anatomy and operative surgery of the posterior mediastinum.

Purpose of the lesson

1. Study the topographic anatomy of organs, vessels, and nerves of the posterior mediastinum.
2. Learn how to gain surgical access to the esophagus.
3. Learn the technique of surgical treatment of esophageal injury.
4. Perform esophagoplasty.
5. Learn how to expose the thoracic duct.

Control questions

1. Surgical anatomy of the thoracic esophagus.
2. Surgical access to the thoracic esophagus.
3. Surgery for esophageal injuries. Esophagotomy. Esophageal resection. Esophageal suturing.
4. Cardiomegaly (dilation of the cardiac part of the stomach): indications, technique.
5. Cardiectomy: indications, technique.
6. Fundoplication: indications, technique.
7. Modern options for esophageal replacement.
8. Surgical anatomy of the thoracic duct. Thoracic duct exposure: indications, technique.
9. Surgical anatomy of azygos vein, hemiazygos vein, thoracic sympathetic trunk, thoracic aorta.

Practical skills

1. Show organs, vessels, and nerves of the posterior mediastinum on a physical body (esophagus, vagus nerve, thoracic duct, azygos vein, hemiazygos vein, thoracic sympathetic trunk, thoracic aorta).

2. Gain surgical access to the thoracic esophagus on a physical body.
3. Suture the esophageal injury.
4. Expose the thoracic lymph duct.

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Test questions and answers for practical lesson № 1

1. Choose what regions are identified within the calvarium?
+ Frontal parietal occipital region, temporal, mastoid process.

- Frontal, parietal, occipital, calvarium.
- Temporal, mastoid process region, parietal.
- Mastoid process region, occipital, temporal, calvarium.

2. What layers of the calvarium compose a scalping flap?

- + Skin, subcutaneous fat, tendinous aponeurosis.
- Subcutaneous fat, tendinous aponeurosis, periosteum.
- Skin, tendinous aponeurosis, periosteal cellular tissue.
- Skin, subcutaneous fat, subaponeurotic cellular tissue.

3. How many layers of adipose tissue are identified in the calvarium?

- + Three.
- One.
- Two.
- Four.

4. Which layer of cellular tissue is composed of the main vessels and nerves of the calvarium?

- + Subcutaneous cellular tissue.
- Subaponeurotic cellular tissue.
- Tendinous aponeurosis.
- Periosteum.

5. What vessels and nerves are identified in the subcutaneous cellular tissue of the frontal region?

- + A., v. et n. supratrochlearis, a., v. et n. supraorbitalis, rr. temporales (n. facialis).
- A. et v. temporalis superficialis, n. auriculotemporalis.
- A. et v. auricularis posterior, n. auricularis magnus, n. auricularis posterior.
- A., v. et n. supraorbitalis, rr. temporales (n. facialis).

6. The branch of what nerve is frontal nerve (n. frontalis)?

- + N. ophthalmicus.

- N. facialis.
- N. auriculotemporalis.
- N. mandibularis.

7. What vessels and nerves are identified in the subcutaneous cellular tissue of the parietal region?

- + A. et v. temporalis superficialis, n. auriculotemporalis.
- A. et v. auricularis posterior, n. auricularis magnus, n. auricularis posterior.
- A., v. et n. supratrochlearis, a., v. et n. supraorbitalis, rr. temporales (n. facialis).
- A., v. et n. auricularis posterior, a. et v. occipitalis, n. occipitalis minor, n. occipitalis major.

8. What vessels and nerves are identified in the subcutaneous cellular tissue of the occipital region?

- + A., v. et n. auricularis posterior, a. et v. occipitalis, n. occipitalis minor, n. occipitalis major.
- A. et v. occipitalis, n. occipitalis minor, n. occipitalis major, n. auricularis magnus.
- A. et v. temporalis superficialis, n. auriculotemporalis.
- A., v. et n. supratrochlearis, a., v. et n. supraorbitalis, rr. temporales (n. facialis).

9. Identify the projection of a. supratrochlearis into the frontal region:

- + At the point of crossing of margo supraorbitalis with the vertical line through the medial eye angle.
- At the border of middle and medial third part of margo supraorbitalis.
- 3 cm outside of medial third part of margo supraorbitalis.
- 1 cm below glabella.

10. Identify the projection of a. supraorbitalis into the frontal region:

- + At the border of middle and medial third part of margo supraorbitalis.

- At the point of crossing margo supraorbitalis with the vertical line through the medial eye angle.

- Along the lateral margin of the orbit.

- At the anterior margin of the chewing muscle.

11. Identify the projection of the exit of a. temporalis superficialis where it can be attached to the bone for temporary stop of bleeding:

- + In front of auricle tragus.

- Along the lateral margin of the orbit.

- On the front margin of the chewing muscle.

- Behind the auricle tragus.

12. Identify the projection of exit of the large occipital nerve:

- + At the point of the middle distance between mastoid process and external occipital tuber.

- At the point of the middle distance between mastoid process and upper cervical vertebrae.

- In front of the auricle tragus.

- At the posterior margin of auricle attachment.

13. The branch of what nerve is the large occipital nerve (n. occipitalis major)?

- + Posterior branch of the second cervical nerve.

- Cervical flexus.

- N. facialis.

- N. auricularis magnus.

14. The branch of what nerve is the small occipital nerve (n. occipitalis minor)?

- + Cervical flexus.

- Posterior branch of the second cervical nerve.

- N. ophtalmicus.

- N. facialis.

15. What muscles are penetrated with the large occipital nerve?

- + Semispinal muscle, trapezius muscle.
- Sternocleidomastoid muscle.
- Superior oblique muscle.
- Inferior oblique muscle.

16. Lymphatic vessels of frontal parietal, occipital region enter the following lymph nodes:

- + Parotidei superficialis et profundi, retroauricularis, occipitals.
- Auricularis posterior, retroauricularis, temporalis superficialis.
- Supraorbitalis, supratrochlearis, occipitals.
- Mandibularis, maxillaris, retroauricularis, occipitals.

17. How are external cranial hematomas classified into?

- + Subcutaneous, subaponeurotic, subperiosteal.
- Epidural, subdural, subarachnoid.
- Subcutaneous, epidural, subdural.
- Subaponeurotic, subperiosteal, subarachnoid.

18. What layers of the connective tissue of the external calvarium are anatomically suitable for the formation of hematomas?

- + Subaponeurotic cellular tissue, subperiosteal cellular tissue.
- Subcutaneous cellular tissue, subarachnoid space.
- Inside the bone, subdural space.
- Subcutaneous cellular tissue, subaponeurotic cellular tissue.

19. In what layer of the calvarium is hematoma in a shape of bunion localized?

- + Subcutaneous cellular tissue.
- Subaponeurotic cellular tissue.

- Subperiosteal cellular tissue.
- Inside the bone.

20. What are hematomas in the subcutaneous cellular tissue of the calvarium like?

- + In a shape of bunion.
- Limited swelling.
- They spread occupying the total surface of the calvarium limited by the line of attachment to the epicranial muscle.
- Limited by the line of attachment of cranial sutures.

21. What are hematomas in the subaponeurotic cellular tissue like?

- + They spread occupying the total surface of the calvarium limited by the line of attachment to the epicranial muscle.
- Limited swelling.
- Limited by the line of the attachment of cranial sutures.
- In a shape of bunion.

22. A patient with an injured head is diagnosed with spreading of hematoma of the calvarium soft tissues. It overhangs the eyebrows. In what layer is it located?

- + Subaponeurotic cellular tissue.
- Subperiosteal cellular tissue.
- Subcutaneous cellular tissue.
- Periosteum.

23. What are subperiosteal hematomas like?

- + Limited by the attachment line of cranial sutures.
- Occupy the total surface of the calvarium.
- Limited by the attachment line of epicranial muscle.
- Limited swelling.

24. What incision of the calvarium is the suitable and less traumatic?

- + Radial.
- Vertical.
- Transverse.
- Z-like.

25. The following reasons can cause profuse bleeding at frontal parietal occipital injury:

+ The vessels are located in the subcutaneous cellular tissue above aponeurosis, vascular adventitia is fixed with fibrous membrane.

– Blood supply is provided by the branches of the external carotid artery, vessels are located beneath the aponeurosis, marked cellular tissue, relatively large lumen of the vessels of this very region.

– Fixation of cranial vessels with the other parts of the head and neck, the walls of blood vessels are fixed with the fibrous membranes, vessels are located beneath the aponeurosis, fixation of cranial vessels with the sinuses of dura mater.

– Blood supply of occipital region is provided only by the branches of external carotid artery and the other regions are supplied with blood by internal carotid artery.

26. What layers is the venous system of frontal parietal occipital region composed of?

+ Superficial veins, diploic veins, sinuses of dura mater.

– Diploic veins, emissary veins, superficial cerebral veins.

– Superficial veins, emissary veins, deep cerebral veins.

– Diploic veins, venous plexus of oval foramen, sinuses of dura mater.

27. What joins sinus sagittalis with v. temporalis superficialis?

+ V. emissaria parietalis.

– V. emissaria mastoidea.

– V. emissaria occipitalis.

- Plexus venosus foraminis ovalis.

28. What does v. emissaria occipitalis join?

- + Sinus transversus and vv. occipitales.
- Sinus sigmoideus and v. auricularis posterior.
- Sinus sagittalis superior and v. temporalis superficialis.
- Sinus sigmoideus and vv. occipitales.

29. What does v. emissaria mastoidea join?

- + Sinus sigmoideus and v. auricularis posterior.
- Sinus transversus and v. temporalis superficialis.
- Sinus sigmoideus and vv. occipitales.
- Sinus sagittalis superior and v. temporalis superficialis.

30. How can the infection from the wounds and suppurated lesions of soft tissues of the head spread to the sinuses of dura mater of the brain?

- + Through vv. emissariae.
- Through vv. diploicae.
- Through Trolar's vein.
- Through inferior anastomotic vein (Labbe's vein).

31. How can the bleeding from the bone vessels be stopped?

- + Rubbing with the wax, stitching, electrocoagulation, pressing with bone rongeur.
- Electrocoagulation, ligatures, clipping.
- Moistening with the solution of hydrogen peroxide, electrocoagulation, clipping, tamponade with hemostatic sponge.
- Tamponade with hemostatic sponge, interrupted sutures, Bruning-Burdenko plasty, ligation.

32. Which layer of the bone is more often damaged at broken bones of the calvarium?

- + Internal plate.

- External plate.
- Spongy plate.
- All the plates.

33. How many layers are the bones of the skull composed of?

- + Three.
- Two.
- Four.
- Five.

34. How can the bleeding from the dura mater be stopped?

- + With the help of ligatures, clipping.
- With the help of rubbing with the wax, stitching, electrocoagulation, pressing with bone rongeur.
- Moistening with the solution of hydrogen peroxide, electrocoagulation, clipping, tamponade with the hemostatic sponge.
- Tamponade with the hemostatic sponge, interrupted sutures, Bruning-Burdenko plasty, ligation.

35. How can the bleeding from the vessels of pia mater be stopped?

- + Moistening with the solution of hydrogen peroxide, electrocoagulation, clipping, tamponade with the hemostatic sponge.
- Tamponade with the hemostatic sponge, interrupted sutures, Bruning-Burdenko plasty, ligation.
- Tamponade with the hemostatic sponge, tamponade with catgut thread, with the help of clamps.
- With the help of clamps.

36. What sinuses of dura mater are more often damaged when the brain of the skull is injured?

- + Sinus sagittalis superior.
- Sinus transverses.
- Sinus rectus.
- Sinus sigmoideus.

37. How can the bleeding from the venous sinuses be stopped?

- + Tamponade with the hemostatic sponge, interrupted sutures, Bruning-Burdenko plasty, ligation.

- Moistening with the solution of hydrogen peroxide, electrocoagulation, clipping, tamponade with the hemostatic sponge.

- Tamponade with the hemostatic sponge, tamponade with the catgut thread, with the help of clamps.

- With the help of clamps.

38. During the operation in the cranial cavity sinuses of the dura mater are damaged. How can the bleeding from the sinuses of dura mater be stopped according to Burdenko method?

- + Suturing of P-announcement bit of external leaf of dura mater.

- Tamponade with a piece of muscle.

- Tamponade of cavity with catgut.

- Both ends of the sinus should be ligated.

39. When the head injuries are considered to be penetrating?

- + When dura mater is damaged.

- When arachnoid mater is damaged.

- When external plate of the skull is damaged.

- When pia mater is damaged.

40. A surgeon is performing the final stage of the operation. According to the classification of surgical instruments, which of the following instruments refers to needle holders?

- + Troyanov's needle holder, Mathieu needle holder, Hegar's needle holder.

- Pier's needle holder, Doyen needle holder, Bogush's needle holder.

- Farabeff's needle holder, Olie's needle holder, Olivecronie's needle holder.

– Troyanov's needle holder, Mathieu needle holder, Dullgren's needle holder, Gigli's needle holder.

41. What symptoms of intracranial hematomas are more often evident?

+ Mydriasis, hemiparesis, bradycardia, lucid interval.

– Dysphagia, anesthesia of the mucous membrane of the pharynx, dysgeusia.

– Aphonia and cardiac disturbances.

– Hemiglossoplegia, dysphagia, dysarthria and deviation of the tongue.

42. What foramen does a. meningeal media penetrate through?

+ Through foramen spinosum.

– Through foramen rotundum.

– Through foramen ovale.

– Through foramen lacerum.

43. What convolution of brain does the passage of the frontal branch of the middle meningeal artery regard?

+ Precentral gyrus.

– Postcentral gyrus.

– Angular gyrus.

– Upper limbic lobe.

44. What convolution of brain does the passage of posterior branch of the middle meningeal artery regard?

+ Temporal lobe.

– Precentral convolution.

– Postcentral convolution.

– Parietal lobe.

45. In what projection is falx cerebri located ?

+ In sagittal.

– In frontal.

- In vertical.
- In horizontal.

46. What does falx cerebri separate?

- + Hemispheres of the brain.
- Occipital part of the brain from the cerebellum.
- Hemispheres of the cerebellum.
- Medulla oblongata from the cerebellum.

47. What is falx cerebri attached to?

- + Margins of sulcus sinus sagittalis.
- Margins of sulcus sinus transversus.
- Internal occipital crest.
- Upper margin of the pyramid.

48. In what direction is tentorium cerebelli localized?

- + Horizontal.
- Vertical.
- Frontal.
- Sagittal.

49. Where does tentorium cerebelli penetrate?

- + In transverse fissure of cerebrum.
- Between the hemispheres of the brain.
- Between the hemispheres of the cerebellum.
- In cerebellar fissure.

50. What passes through tentorial fissure?

- + Brain column.
- V. cerebri magna.
- Sinus sagittalis inferior.
- Sinus rectus.

51. Where is sinus sagittalis superior located?

+ On the upper margin of falx cerebri, in sulcus sinus sagittalis.

– On the low margin of falx cerebri, in sulcus sinus sagittalis.

– At the point of falx cerebri fixation with tentorium cerebelli.

– Along sulcus transversus of occipital bone.

52. What is the sinus of dura mater which is directly connected with venous system of the face?

+ Cavernous.

– Sinus rectus.

– Superior petrosal sinus.

– Sigmoid.

53. Where does sinus sagittalis superior drain into?

+ Sinus transversus.

– Sinus rectus.

– Sinus sigmoideus.

– Sinus cavernosus.

54. Where is sinus sagittalis inferior located?

+ Along the low margin of falx cerebri.

– Along the upper margin of falx cerebri.

– At the point of internal occipital protuberance.

– At the point of falx cerebri fixation with tentorium cerebelli.

55. Where does sinus sagittalis inferior drain into?

+ Sinus rectus.

– Sinus transversus.

– Sinus sigmoideus.

– Sinus occipitalis.

56. Where is sinus rectus located?

+ At the point of falx cerebri fixation with tentorium cerebelli.

- Along the upper margin of falx cerebri.
- Along the low margin of falx cerebri.
- Along the internal occipital crest.

57. Where does sinus rectus drain into?

- + Sinus transverses.
- Sinus sigmoideus.
- Sinus cavernosus.
- Sinus sagittalis inferior.

58. Where is sinus transversus located?

+ At the point of fixation of tentorium cerebelli with sulcus of occipital bone.

- In sulcus sinus sagittalis.
- In sulcus sinus sigmoideus.
- On crista occipitalis interna.

59. Where is sinus occipitalis located?

+ Along the posterior margin of falx cerebelli, on crista occipitalis interna.

- On sulcus transversus of occipital bone.
- On both sides of sella turcica.

– At the point of falx cerebri fixation with tentorium cerebelli.

60. Where does sinus occipitalis drain into?

- + Sinus sigmoideus.
- Sinus transversus.
- Sinus rectus.
- Sinus sagittalis superior.

61. Where is sinus cavernosus located?

- + On both sides of sella turcica.

- Along superior margin of the pyramid of the temporal bone.
- Inferior margin of the pyramid of the temporal bone.
- On crista occipitalis interna.

62. On what account is the connection of cavernous sinus with superior sagittalis sinus performed?

- + Trollear's vein.
- Labbe's vein.
- V. cerebri magna.
- Vv. ophthalmicae.

63. On what account is the connection of cavernous sinus with the venous system of the face performed?

- + V. ophthalmica superior et inferior.
- Plexus venosus foraminis ovalis.
- Trollear's vein.
- Labbe's vein.

64. What vein connects sinus cavernosus with sinus transversus?

- + Labbe's vein.
- Trollear's vein.
- V. cerebri magna.
- V. cerebri media superficialis.

65. What passes through the upper wall of sinus cavernosus?

- + N. oculomotoris and n. trochlearis.
- N. ophthalmicus.
- N. abducens and a. carotis interna.
- N. facialis.

66. What passes in the lateral wall of sinus cavernosus?

- + N. ophthalmicus.
- N. oculomotorius.
- N. trochlearis.

– N. abducens.

67. What passes through sinus cavernosus?

+ N. abducens and a. carotis interna.

– N. ophthalmicus.

– N. oculomotorius and n. trochlearis.

– N. opticus.

68. What is observed at thrombosis of sinus cavernosus?

+ Foix – Thevenard's sign.

– Behr's symptom.

– Mackenzie's syndrome.

– Sluder's syndrome.

69. What are clinical signs of thrombosis at sinus cavernosus?

+ Complete ophthalmoplegia, protrusion, ptosis.

– Pulsing protrusion, dysphagia, amaurosis.

– Torticollis.

– Aponia.

70. What is observed at sinus cavernosus damage?

+ Pulsing protrusion.

– Dysphagia.

– Aponia.

– Foix – Thevenard's sign.

71. What artery supplies dura mater of anterior cranial fossa?

+ A. meningeal anterior.

– A. meningeal media.

– A. ophthalmica.

– A. carotis interna.

72. What artery supplies dura mater of the middle cranial fossa?

+ A. meningeal media.

- A. meningea anterior.
- A. meningea posterior.
- A. carotis interna.

73. What artery supplies dura mater of posterior cranial fossa?

- + A. meningea posterior (a. pharyngea ascendens branch).
- A. meningea posterior (a. occipitalis branch).
- A. meningea posterior (a. auricularis posterior branch).
- A. meningea posterior (a. maxillaris branch).

74. What nerves is dura mater innervated by?

+ R. tentorii (n. ophthalmicus branch); r. meningeus medius (from n. maxillaris); r. meningeus (from n. mandibularis); r. meningeus (from n. vagus).

– R. meningeus medius (from n. maxillaris); r. meningeus (from n. mandibularis); r. auricularis (from n. vagus).

– N. olfactorius; rr. ganglionares ad ganglion pterygopalatinum (from n. maxillaris); radix cranialis, radix spinalis (from n. accessorius).

– R. tentorius, r. meningeus recurrens, r. meningeus anterior (n. ophthalmicus branches); r. meningeus medius (from n. maxillaris).

75. What is the pressure of cerebrospinal fluid at lying position?

- + 120–180 ml of water column.
- 120–180 ml of mercury column.
- 200–250 ml of water column.
- 200–250 ml of mercury column.

76. What is the pressure of cerebrospinal fluid at sitting position?

- + 200–250 ml of water column.
- 200–250 ml of mercury column.

- 120–180 ml of water column.
- 120–180 ml of mercury column.

77. Which liquid dynamic tests are used to estimate patency of subarachnoid space?

- + Queckenstedt's test.
- Delbe-Pertes test.
- Trojanov-Trendelenburg's test.
- Hackenbruch's test.

78. What are the possible ways of cerebrospinal fluid circulation?

- + From the fourth ventricle through aqueduct of cerebrum into the third ventricle.
- From the fourth ventricle through Magendie's and Luschka's foramen into the third ventricle.
- From the fourth ventricle through Monro's foramen into the third ventricle.
- From the fourth ventricle through aqueduct of cerebrum into the lateral ventricles.

79. What arteries form anterior arterial circle of brain?

- + A. communicans anterior.
- A. carotis interna.
- A. communicans posterior.
- A. cerebri anterior.

80. What arteries form lateral arterial circle of brain?

- + A. communicans posterior.
- A. cerebri posterior.
- A. cerebri anterior.
- A. communicans anterior.

81. What arteries form the circle of Willis?

- + A. cerebri posterior.

- A. cerebri anterior.
- A. communicans anterior.
- A. communicans posterior.

82. What veins of brain form collateral circulation and are of practical significance at ligation of superior sinus sagittalis?

- + Trolar's vein and Labbe's vein.
- V. cerebri media superficialis.
- Vv. cerebri superiores.
- Vv. cerebri inferiores.

83. What is observed when the first pair of cranial nerves is damaged?

- + Anosmia.
- Amaurosis.
- Amblyopia.
- Aphonia.

84. What is observed when the second pair of cranial nerves is damaged?

- + Amblyopia and amaurosis.
- Strabismus divergens, ptos et mydrias.
- Strabismus convergens.
- Aphonia.

85. What is observed when the third pair of cranial nerves is damaged?

- + Strabismus divergens, ptos et mydrias.
- Amblyopia and amaurosis.
- Aphonia and anosmia.
- Hemianopsia.

86. What is observed when the fourth pair of cranial nerves is damaged?

- + Squint, diplopia.

- Dysphagia.
- Strabismus divergens.
- Strabismus convergens.

87. What is observed when the sixth pair of cranial nerves is damaged?

- + Strabismus convergens.
- Strabismus divergens.
- Mydriasis.
- Amaurosis.

88. What is observed when the seventh pair of cranial nerves is damaged on the exit of the channel?

- + Hemimimima, disproportion of oral fissure towards a healthy side, smoothing of the nasolabial fold, lagophthalmos.
- Aphonia.
- Hemimimima, oligopterygism, dysgeusia.
- Hemimimima and disorders of lacrimal excretory system.

89. In a female patient with sinister suppurating mumps developed symptoms of smooth nasolabial and nasobuccal folds. The diagnosis is paresis of mimic muscles of the face on the left side. What nerve is involved into the inflammatory process in this case?

- + Facial nerve.
- The second branch of trigeminal nerve.
- The third branch of trigeminal nerve.
- N. auriculotemporalis.

90. What is observed when the facial nerve in the channel above the branch of chorda tympani is damaged?

- + Hemimimima, oligopterygism, dysgeusia.
- Hemimimima, disproportion of oral fissure towards a healthy side, smoothing of the nasolabial fold.
- Hemimimima and disorders of lacrimal excretory system.
- Hemimimima and hyperacusia.

91. What is observed when the facial nerve in the channel above the branch of n. stapedius is damaged?

- + Hemimimia and hyperacusia.
- Hemimimia, oligoptyalism, dysgeusia.
- Hemimimia and disorders of lacrimal excretory system.
- Anosmia.

92. What is observed when the facial nerve in the channel above the branch of n. petrosus major is damaged?

- + Hemimimia and disorders of lacrimal excretory system.
- Hemimimia and hyperacusia.
- Hemimimia, oligoptyalism, dysgeusia.
- Amaurosis.

93. What symptoms are typical for rr. temporales and n. facialis damage?

- + Lagophthalmos.
- Mydriasis.
- Ptosis.

94. What is the broken skull at the point of foramen jugularis characterized by?

- + Mackenzie's syndrome.
- Behr's symptom.
- Foix-Thevenard sign.
- Villaret's symptom.

95. What is the damage of the ninth pair of cranial nerves characterized by?

- + Dysphagia, anesthesia of mucous membrane of the larynx, dysgeusia.
- Aphonia and cardiac disturbances.
- Hemiglossoplegia, dysphagia, dysarthria and deviation of the tongue.

- Hemimimia and disorders of lacrimal system.

96. What is the damage of the tenth pair of cranial nerves characterized by?

- + Aphonia and cardiac disturbance.
- Dysphagia, anesthesia of mucous membrane of the larynx, dysgeusia.
- Hemiglossoplegia, dysphagia, dysarthria and deviation of the tongue.
- Haemimimia, oligoptyalism, dysgeuzia.

97. What is the damage of the eleventh pair of cranial nerves characterized by?

- +Torticollis.
- Amaurosis.
- Aphonia.
- Anosmia.

98. A female patient is diagnosed with the damage of foramen jugularis. Which of the following nerves does penetrate through it?

- + Vagus nerve, accessory nerve, glossopharyngeal nerve.
- Vestibulocochlear nerve and intermediate nerve.
- Trigeminal nerve and vagus nerve.
- Sublingual nerve and facial nerve.

99. What is the damage of the twelfth pair of cranial nerves characterized by?

- + Hemiglossoplegia, dysphagia, dysarthria and deviation of the tongue.
- Dysphagia, anesthesia of mucous membrane of the larynx, dysgeusia.
- Hemimimia, oligoptyalism, dysgeuzia. Torticollis.

100. What intracranial hematomas and what spaces are more often formed when a. meningeal media is damaged?

- + Epidural space and epidural hematomas.
- Epidural space and subdural hematomas.
- Subdural space and subdural hematomas.
- Subdural space and subarachnoid hematomas.

101. A patient is diagnosed with craniocerebral injury resulted from the punch on the face. What is the broken base of the brain at frontal cranial fossa characterized by?

- + Nasal bleeding, liquorrhea from the nose, bruises and subcutaneous emphysema in the orbit, scent disorders.
- Complete ophthalmoplegia, protrusion, ptosis.
- Squint, diplopia.
- Hemimimicry, disproportion of oral fissure towards a healthy side, smoothing of the nasolabial fold, lagophthalmos.

102. What is the break at the middle cranial fossa with the damaged pyramid of the temporal bone characterized by?

- + Bleeding, liquorrhea from meatus acusticus externus and damage of the seventh and eighth pairs of craniocerebral nerves.
- Nasal bleeding, liquorrhea from the nose, bruises and subcutaneous emphysema in the orbit, scent disorders, aphonia and cardiac disturbance.
- Hemiglossoplegia, dysphagia, dysarthria, deviation of the tongue.
- Hemimimicry, disorders of the lacrimal system and damage of the ninth and tenth pairs of cranial nerves.

Test questions and answers for practical lesson № 2

1. Identify boundaries of temporal region:

+ From above and behind – superior temporal line, from below zygomatic arch, in front frontal process of zygomatic bone and zygomatic process of frontal bone.

– In front supraorbital margin of frontal bone, behind – external occipital protuberance and superior nuchal line, laterally – superior temporal line.

– From above – the line that meets the continuing zygomatic arch, in front – the line of attachment of the auricle, from below and laterally – corresponds to the shape of mastoid process.

– Boundaries of temporal muscle.

2. What is located in the subcutaneous cellular tissue of temporal lobe?

+ M. m. auricularis anterior et superior, a. et v. temporalis superficialis, n. auriculotemporalis, n. zygomaticotemporalis, a. et v. auricularis posterior, n. occipitalis minor, rr. temporales (n. facialis).

– A., v. et n. auricularis posterior, a. et v. occipitalis, n. occipitalis minor, n. occipitalis major.

– M. auricularis posterior, a. et v. auricularis posterior, n. auricularis magnus, n. occipitalis minor, n. auricularis posterior, lymphatic vessels and nodes.

– A., v. et n. supratrochlearis, a., v. et n. supraorbitalis, rr. temporales (n. facialis).

3. How many layers of adipose tissue are in the temporal lobe?

+ Five.

– Four.

– Three.

– Two.

4. Where is the superficial abscess of temporal lobe located?

- + Between the skin and superficial leaf of temporal aponeurosis.
- Between temporal aponeurosis and external surface of temporal muscle.
- Between superficial and deep leaves of temporal aponeurosis.
- Between periosteum and bone.

5. Identify possible ways of further spread of infection from the temporal lobe:

- + Into subtemporal fossa, parotid- masticatory region, space under masticatory region, frontal part, into the orbit, temporal bone, into the cranial cavity.
- Into buccal part, temporal-pterygoid and interpterygoid space, parapharyngeal space, into parotid-masticatory part.
- Into lateral triangle of the neck, in frontal parietal occipital part, into mastoid process, into cranial cavity.
- Limited by temporal lobe.

6. What incision is used more often to reveal superficial abscesses of the temporal lobe?

- + Anterior inclined incision behind the frontal process of zygomatic bone.
- Arciform incision alongside the lower temporal lines of temporal bone.
- Horizontal incision over zygomatic arch.
- Posterior vertical incision through the centre of inflammatory infiltrate.

7. What incision is most frequently used to reveal interaponeurotic abscesses of temporal lobe?

- + Horizontal incision over zygomatic arch.
- Horizontal incision under zygomatic arch.
- Posterior vertical incision through the centre of inflammatory infiltrate.

– Zigzag incision above zygomatic arch.

8. What passes through the interaponeurotic temporal space?

+ A. et v. temporalis media, n. zygomaticotemporalis.

– A. et v. temporalis superficialis, n. auriculotemporalis.

– V. retromandibularis.

– Ductus parotideus.

9. What is deep temporal cellular space limited by?

+ Temporal muscle and periosteum.

– Periosteum and bone.

– Temporal aponeurosis and external surface of the temporal muscle.

– Superficial and deep leaves of temporal aponeurosis.

10. What incision is used more frequently to reveal deep temporal abscesses?

+ Arciform incision along the lower temporal lines of temporal bone.

– Horizontal incision under zygomatic arch.

– Posterior vertical incision through the center of the inflammatory infiltrate.

– Two vertical incisions.

11. What does deep temporal cellular space contain?

+ A. et v. temporales profundae, deep temporal nerves.

– A. et v. temporalis media.

– A. et v. temporalis superficialis.

– N. auriculotemporalis.

12. What does the osseous basis of temporal lobe contain?

+ A big wing of cuneiform bone, scale of temporal bone, part of the frontal bone, part of the parietal bone.

– A small wing of cuneiform bone, frontal scale, frontal margin of parietal bone, ethmoid bone.

- Temporal bone, maxilla, zygomatic bone, mandible.
- A big wing of cuniform bone, mastoid process of temporal bone, part of frontal bone.

13. What is character for the structure of temporal bone?

- + Absence of spongy layer – squamous structure.
- It contains airway sinus pneumatic structure.
- It is composed of spongy and compact layers – diploetic structure.
- It has three-layer structure, contains collars.

14. Which anatomical formation is the temporal muscle tendon attached to?

- + To the branch and coronoid process of mandible.
- To the cervix of the mandible.
- To the zygomatic process of maxilla.
- To the condylar process.

15. Identify one of the first signs of the inflammation of deep cellular tissue of temporal lobe:

- + Trismus.
- Lagophthalmos.
- Dysphagia.
- Rigidity of occipital muscles.

16. What can be damaged at the dissection of the temporal abscess?

+ Rr. temporales n. facialis, rr zygomatici n. facialis, a. et v. temporalis superficialis, n. auriculotemporalis, deep temporal vessels and nerves.

– A., v. et n. supratrochlearis, a., v. et n. supraorbitalis, rr. temporales (n. facialis).

– A., v et n. auricularis posterior, a. et v. occipitalis, n. occipitalis minor, n. occipitalis major.

– M. auricularis posterior, a. et v. auricularis posterior, n. auricularis magnus, n. occipitalis minor, n. auricularis posterior.

17. What is located in subcutaneous cellular tissue in the area of mastoid process?

+ M. auricularis posterior, a. et v. auricularis posterior, n. auricularis magnus, n. occipitalis minor, n. auricularis posterior, lymphatic vessels and nodes.

– M. m. auricularis anterior et superior, a. et v. temporalis superficialis, n. auriculotemporalis, n. zygomaticotemporalis.

– A. et v. auricularis posterior, n. occipitalis minor, rr. temporales (n. facialis).

– A., v et n. auricularis posterior, a. et v. occipitalis, n. occipitalis minor, n. occipitalis major et v. temporalis superficialis, n. auriculotemporalis.

18. Note the front border of Chipault's triangle?

+ Vertical line which passes along the posterior margin of external auditory meatus from the apex of mastoid process through spina suprameatum.

– Crista mastoidea.

– Horizontal line which is a continuation of zygomatic arch.

– Crista supramastoidea.

19. Identify the back border of Chipault's triangle:

+ Crista mastoidea.

– Horizontal line which is a continuation of zygomatic arch.

– Vertical line which passes along the posterior margin of external auditory meatus from the apex of mastoid process through spina suprameatum.

– Above supramastoid crest.

20. Identify the upper border of Chipault's triangle?

+ Horizontal line which is a continuation of zygomatic arch.

– Crista mastoidea.

- Vertical line which passes through the posterior margin of external auditory meatus from the apex of mastoid process through spina suprameatum.

- Porus acusticus externus.

21. Where can pus penetrate destroying the posterior wall of antrum mastoideum?

- + Into sinus sigmoideus.

- Into middle cranial fossa.

- Into posterior cranial fossa.

- Into the cavity of the middle ear.

22. Where can pus penetrate destroying the upper wall of antrum mastoideum?

- + Into middle cranial fossa.

- Into sinus sigmoideus.

- Into posterior cranial fossa.

- Into the cavity of the middle ear.

23. Identify the projection of central sulcus of cerebrum according to Kronlein's scheme:

- + From the intersection of back vertical line with sagittal line to the intersection of front vertical line with the upper horizontal line.

- From the intersection of back vertical line with the upper horizontal line to the intersection of front vertical line with the lower horizontal line.

- From the intersection of upper front vertical line with the upper horizontal line to the intersection of back vertical line with the lower horizontal line.

- From the intersection of front vertical line with sagittal line to the intersection of back vertical line with the lower horizontal line.

24. Where is the column of a. meningeal media located according to Kronlein's scheme?

- + At the intersection of lower horizontal line with front vertical line.
- At the intersection of top horizontal line with front vertical line.
- At the intersection of lower horizontal line with middle vertical line.
- At the intersection of lower horizontal line with back vertical line.

25. Where is the projection of anterior branch of a. meningeal media determined according to Kronlein's scheme?

- + At the intersection of upper horizontal line and front vertical line.
- At the intersection of the lower horizontal line with middle vertical line.
- At the intersection of lower back horizontal line with back vertical line.
- On the bisectrix of the angle formed by the projection of central sulcus and upper horizontal line.

26. Identify the projection of lateral (Sylvius) sulcus according to Kronlein's scheme:

- + Bisectrix of the angle formed by the projection of central fissure and horizontal line.
- Intersection of the upper front horizontal line and front vertical line.
- Intersection of lower horizontal line and middle vertical line.
- Intersection of lower horizontal line and back vertical line.

27. What foramen does a. meningeal media penetrate into the cranial cavity through?

- + Foramen spinosum.
- Foramen rotundum.
- Foramen ovale.

- Foramen lacerum.

28. What convolution of the brain does the course of the anterior branch of the middle meningeal artery correspond to?

- + Precentral convolution.
- Postcentral convolution.
- Angular convolution.
- Upper temporal convolution.

29. What convolution of the brain does the course of the back branch of the middle meningeal artery correspond to?

- + Temporal part.
- Precentral convolution.
- Postcentral convolution.
- Parietal part.

30. How is the method of trepanation of the skull called at which a cutaneous aponeurotic flap is separately dissected with a wide basis and further its scalping and sawing the separate osseus flap?

- + Osteoplastic craniotomy according to Olivecrona's method.
- Osteoplastic craniotomy according to Wagner-Wolfe's method.
- Osteoplastic craniotomy according to Cushing's method.
- Decompressive craniotomy according to Olivecrona's method.

31. What tissues compose the first flap at osteoplastic craniotomy by Olivecrona's method?

- + Skin, subcutaneous cellular tissue, aponeurosis
- Skin, subcutaneous cellular tissue, aponeurosis, subaponeurotic cellular tissue, periosteum, bone.
- Skin, subcutaneous cellular tissue, muscle, periosteum, bone.
- Skin, subcutaneous cellular tissue.

32. What tissues compose the second flap at osteoplastic craniotomy by Olivecrona's method?

- + Muscle, periosteum, bone.
- Skin, subcutaneous cellular tissue, aponeurosis.
- Skin, subcutaneous cellular tissue, aponeurosis, subaponeurotic cellular tissue, muscle, periosteum, bone.
- Skin, subcutaneous cellular tissue.

33. What vessel is adjacent to the internal surface of the temporal bone?

- + A. meningia media.
- Temporalis profunda.
- A. cerebri media.
- A. cerebri anterior.

34. What incisions are used for dissection of abscesses of the temporal lobe?

- + Front oblique section, rear vertical section, horizontal section above zygomatic arch.
- Two vertical sections, horizontal section under zygomatic arch along the upper and lower edge of the orbit.
- Zigzag section above zygomatic arch.

35. Which of these methods does correspond to decompressive trepanation of the skull?

- + Cushing's technique.
- Wagner-Wolf's technique.
- Olivecrona's technique.
- Bogaert's technique.

36. Patient with the increased intracranial pressure the decompressive trepanation of the skull was appointed. Where is it performed?

- + In the right temporal region.

- In the right parietal region.
- In the left parietal region.
- In the right and left occipital regions.

37. Head injury resulted in increased intracranial pressure. In what part of the calvarium is decompressive trepanation of the skull performed at the known localization of the pathologic process?

- + Directly above the focus of the pathological process.
- In the left temporal region.
- In the occipital part in symmetrically opposite region.
- In the right parietal region.

38. A patient is appointed to perform trepanation of the mastoid process. Which of the special instruments are used at craniotomy of mastoid process?

- + Voyachek's chisel or gouge.
- Liston's forceps.
- Dahlgren's forceps.
- Doyen's forceps.

39. What complications can occur at craniotomy of mastoid process in postoperative period if at the operation the front border of Chipault's triangle was damaged?

- + Peripheral paralysis of n. facialis on the side of the operation.
- Central paralysis of n. facialis on the opposite side of the operation.
- Damage of the internal ear.
- Damage of sigmoid sinus and its hemorrhage.

40. What complications can occur at craniotomy of mastoid process in postoperative period if at the operation the upper border of Chipault's triangle was damaged?

- + Infection of the cranial cavity.
- Peripheral paralysis of n. facialis on the side of the operation.
- Central paralysis of n. facialis on the opposite side.

- Central paralysis of n. facialis on the side of the operation.

41. What complications can occur at craniotomy of mastoid process in postoperative period if at the operation the posterior border of Chipault's triangle was damaged?

- + Damage of sigmoid sinus and its hemorrhage.
- Peripheral paralysis of n. facialis on the side of the operation.
- Infection of the cranial cavity.
- Damage of the internal ear.

42. A female patient got a blunt injury of the temporal part of the head. She was diagnosed with epidural hematoma and as a result the osteoplastic craniotomy was performed. What surgical instruments are used to perform craniotomy?

+ General surgical instruments, trepan, bone cutter, electrocoagulator, Dalhren's forceps, Polenov's conductor, Gigli wire saw.

– General surgical instruments, trepan, bone cutter, electrocoagulator, dissecting blade saw.

– General surgical instruments, trepan, bone cutter, electrocoagulator, arc saw.

– General surgical instruments, trepan, bone cutter, electrocoagulator, Dalhren's forceps.

Test questions and answers for practical lesson № 3

1. Identify the boundaries of lateral part of the face:

+ From above zygomatic arch and lower margin of eye fossa, at the bottom – lower margin of mandibular base, in front nasolabial and nasobuccal folds and behind posterior margin of the lower jaw.

– In front supraorbital margin of frontal bone, behind external occipital protuberance and the upper nuchal line, and laterally temporal top line.

– From above – the line that meets the continuing zygomatic arch, in front – the line of the ear, at the bottom and laterally – missiles the shape of mastoid process.

– From above and behind – top temporal line, at the bottom zygomatic arch, in front – temporal process of zygomatic bone and zygomatic process of frontal bone.

2. What is the skin of buccal part innervated by?

+ N. zygomaticofacialis, n. buccalis (from n. mandibularis), n. infraorbitalis, n. mentalis.

– N. zygomaticotemporalis, n. auriculotemporalis, n. auricularis magnus, rr. Buccalis (from n. facialis).

– N. auricularis magnus, n. occipitalis minor, n. auricularis posterior.

– N. supratrochlearis, n. supraorbitalis, rr. temporales (n. facialis).

3. What is located externally and in front of fat body of cheek?

+ Parotid duct.

– Arcus zygomaticus.

– Mandibular field.

– M. buccinator.

4. What arteries accompany ductus parotideus?

+ A. transversa faciei.

- A. temporalis media.
- A. facialis.
- A. temporalis superficialis.

5. Identify the processes of body fat of cheek.

- + Temporal, orbital, pterygopalatal.
- Temporal, orbital, coronal.
- Nasal, orbital, pterygopalatal.
- Submasseteric, orbital, pterygopalatal.

6. What cellular spaces does the body fat of cheek bind?

- + All the listed below.
- Cellular tissue of buccal region, interpterygoid region, temporal pterygoid region, subaponeurotic space of temporal region.
- Cellular tissue of pterygopalatal fossa.
- Orbital cellular tissue.

7. What is m. depressor labii inferioris innervated by?

- + R. marginalis mandibulae.
- N. mentalis.
- N. infraorbitalis.
- N. mylohyoideus.

8. On examination of the patient's lateral superficial wound of the face, there was not revealed pulse of the facial artery. Where is the facial artery palpated?

- + Near the front margin of the masseteric muscle of the lower mandibular margin.
- Above the ear.
- Near lobule of the ear.
- Near tragus.

9. Identify veins capable to retrograde blood stream and transmit infection to cavernous sinus at furunculosis of soft tissues of the facial skull:

+ V. facialis → v. angularis → vv. ophthalmicae → sinus cavernosus; or v. facialis → v. faciei profunda → plexus pterygoideus → v. emissaria foraminis laceri → plexus venosus foraminis ovale → sinus cavernosus.

– V. facialis → v. temporalis superficialis → v. auricularis posterior → v. jugularis externa v. facialis → v. supratrochlearis, → v. supraorbitalis, → vv. ophthalmicae.

– V. facialis → v. supratrochlearis, → v. supraorbitalis → v. faciei profunda → plexus pterygoideus.

10. Identify the projection of infraorbital neurovascular fascicle:

+ 0.5 cm below the middle of the lower orbital margin.

– 0.5 cm below the point situated between medial one third of the lower orbital margin.

– Vertical line via medial angle of the eye.

– 1.0 cm outside the wing of the nose.

11. Identify the projection of mental neurovascular fascicle:

+ The same vertical line of supraorbital and infraorbital foramina.

– The region of the angle of mouth.

– The middle of basis mandible

– Front margin of m. masseter.

12. Identify the projection of supraorbital neurovascular fascicle:

+ The border of medial and middle third of margo supraorbitalis.

– The middle of margo supraorbitalis crossing vertical line through medial angle of the eye with margo supraorbitalis.

– 0.5 cm above the mid-margo supraorbitalis.

13. What is the skin of parotid masseteric region innervated by?

- + N. zygomaticofacialis, n. buccalis (from n. mandibularis), n. auriculotemporalis, n. auricularis magnus.
- n. buccalis (from n. mandibularis), n. infraorbitalis, n. mentalis.
- N. auriculotemporalis, n. auricularis magnus, rr. buccalis (from n. facialis).
- N. auricularis magnus, n. supratrochlearis, n. supraorbitalis, rr. temporales (n. facialis).

14. What is located in the subcutaneous cellular tissue of parotid masseteric region?

- + N. auricularis magnus, as well. et v. transversa faciei, branches of n. facialis, n. auriculotemporalis.
- Mm. auricularis anterior et superior, a. et v. temporalis superficialis, n. auriculotemporalis.
- N. zygomaticotemporalis, a. et v. auricularis posterior, n. occipitalis minor, rr. temporales (n. facialis).
- A., v et n. buccalis (from n. mandibularis), n. infraorbitalis, n. mentalis.

15. Identify the front boundary of spatium parotideum:

- + Posterior and external surface of m. masseter, branch of mandible, m. pterygoideus medialis.
- M. pterygoideus lateralis.
- Submandibular salivary gland.
- Styloid process, m. stylohyoideus, m. styloglossus, m. stylopharyngeus, cellular tissue of front parapharyngeal space.

16. Identify the lower border of spatium parotideum:

- + Submandibular salivary gland.
- Back and foreign surface of m. masseter, branch of mandible, m. pterygoideus medialis.
- Styloid process, m. stylohyoideus, m. styloglossus, m. stylopharyngeus, cellular tissue of front parapharyngeal space.

- M. sternocleidomastoideus, rear venter of m. digastricus, zygomatic process.

17. Identify the back boundary of spatium parotideum?

- + M. sternocleidomastoideus, rear venter of m. digastricus, mastoid process.

- Posterior and foreign surface of m. masseter, branch of mandible, m. pterygoideus medialis.

- Zhonesko's diaphragm.

- Styloid process, m. stylohyoideus, m. styloglossus, m. stylopharyngeus, cellular tissue of front parapharyngeal space.

18. Identify medial border of spatium parotideum?

- + Styloid process, m. stylohyoideus, m. styloglossus, m. stylopharyngeus, cellular tissue of front parapharyngeal space.

- Subcutaneous adipose tissue.

- External acoustic passage.

- Posterior and foreign surface of m. masseter, branch of mandible, m. pterygoideus medialis.

19. Identify lateral border of spatium parotideum?

- + Subcutaneous adipose tissue.

- M. sternocleidomastoideus, rear venter of m. digastricus, mastoid process.

- Posterior and foreign surface of m. masseter, branch of mandible, m. pterygoideus medialis.

- M. pterygoideus lateralis.

20. Identify the top border of spatium parotideum.

- + External acoustic meatus.

- Skull base.

- Ala major ossis sphenoidale.

- Zygomatic arch.

21. What passes through gl. parotis?

+ A. carotis externa, v. retromandibularis, n. facialis, n. auriculotemporalis.

– A. carotis interna, v. jugularis interna, v. jugularis externa, v. facialis.

– A., v. et n. buccalis (from n. mandibularis), n. infraorbitalis, n. mentalis.

– N. auricularis magnus, n. supratrochlearis, n. supraorbitalis, rr. temporales (n. facialis).

22. Identify the branches of n. facialis entering gl. parotis?

+ N. auricularis posterior, r. stylohyoideus, r. digastricus.

– Rr. temporales, n. auriculotemporalis, n. buccalis.

– Rr. temporales, rr. zygomatici, rr. buccales, marginalis mandibulae, r. colli.

– Rr. parotidei, rr. labiales, rr. mentales.

23. Identify branches of pes anserinus major?

+ Rr. temporales, rr. zygomatici, rr. buccales, r. marginalis mandibulae, r. colli.

– Rr. parotidei, rr. labiales, rr. mentales.

– N. auricularis posterior, r. stylohyoideus, r. digastricus.

– Rr. temporales, n. auriculotemporalis, n. buccalis.

24. Identify the projection of temporal facial nerve branches.

+ From lobule of the ear to the external angle of the eye.

– From mastoid process to the angle of mouth.

– Along the vertical line in front of the tragus.

– From lobule of the ear to the external angle of the nose.

25. Identify the projection of marginal branch of mandible.

+ 0.5-1 cm below the bottom edge of the mandible.

– 0.5-1 cm above the lobule of the ear to the lateral angle of the mouth.

– 1 cm below and parallel to zygomatic arch.

- From external acoustic meatus to the point located in the middle between wing of the nose and mouth angle.

26. Identify the projection of excretory duct of parotid salivary gland:

- + From external acoustic passage to the point located in the middle between the wing of the nose and angle of mouth.

- 0.5-1 cm above the lobule of the ear to the wing of the nose.
- 1 cm below and parallel to the bottom of the mandible.
- From the lobule of the ear to external angle of the eye.

27. What tissues are tightly dissected at purulent parotitis?

- + All the listed below.
- Skin.
- Subcutaneous cellular tissue.
- Parotid fascia.

28. What tissues are tightly dissected at purulent parotitis?

- + Glandular parenchyma.
- Subcutaneous cellular tissue.
- Mimic muscles.
- Parotid fascia.

29. Identify possible complications of dissections at purulent parotitis:

- + All the listed below.
- Damage of external carotid artery and v. retromandibularis.
- Broken branches of n. facialis.
- N. auriculotemporalis.

30. An injured bottom of the patient's oral cavity caused motor speech disorders. What nerve could be damaged in this case?

- + Sublingual nerve.
- Lingual nerve.
- Glossopharyngeal nerve.

- Chorda tympani.

31. Identify the sphincter of parotid duct:

- + M. buccinator.
- Oddi's sphincter.
- M. masseter.
- Medial pterygoid muscle.

32. Identify the fibers of Wrisberg's nerve:

- + N. petrosus major, chorda tympani.
- N. petrosus minor, n. canalis pterygoidei.
- N. tympanicus, n. stapedius.
- There's no right answer.

33. Identify motor fibers of the facial nerve which innervate into fallopian tube:

- + N. stapedius.
- N. petrosus major
- N. petrosus minor.
- Chorda tympani.

34. How is the excretory duct of parotid gland called according to its author?

- + Stenon duct.
- Wharton's duct.
- Bartholin's duct.
- Walter's duct.

35. In a patient developed thrombosis of the facial vein resulted from the involvement of it into the inflammatory process. What vein can thrombus from the facial vein get directly into the system of intracranial sinuses and veins through?

- + V. angularis.
- V. jugularis interna.
- V. jugularis externa.

- V. transversa faciei.

36. What is temporal pterygoid space externally limited by?

- + M. temporalis.
- M. pterygoideus lateralis.
- M. pterygoideus medialis.
- M. masseter.

37. What is temporal pterygoid space medially limited by?

- + M. pterygoideus lateralis.
- M. pterygoideus medialis.
- Branch of mandibular.
- Lamina lateralis processus pterygoideus.

38. What is temporal pterygoid space from behind limited by?

- + Processus condylaris mandibulae.
- M. sternocleidomastoideus.
- Mastoid process.
- Posterior belly of m. digastricus.

39. What is temporal pterygoid space in front limited by?

- + Tuber maxillae.
- M. masseter.
- Branch of mandible.
- M. temporalis.

40. What is temporal pterygoid space from above limited by?

- + Lower surface of the large wing of styloid bone.
- Zygomatic arch.
- Tuber maxillae.
- External acoustic meatus.

41. What is temporal pterygoid space from below limited by?

- + Passes to interpterygoid.

- M. pterygoideus lateralis.
- M. pterygoideus medialis.
- Submandibular gland.

42. What is temporal pterygoid space composed of?

- + Plexus pterygoideus, nn. temporales profundi, n. massetericus, n. buccalis, n. maxillaris.
- N. maxillaris, n. mandibularis, v. retromandibularis.
- M. pterygoideus lateralis, m. pterygoideus medialis, submandibular gland.
- Plexus pterygoideus, a. auricularis profunda, a. tympanica anterior, a. alveolaris inferior, a. meningea media.

43. What are the branches of the first part of a. maxillaris?

- + A. auricularis profunda, a. tympanica anterior, a. alveolaris inferior, a. meningea media.
- A. masseterica, a. buccalis, a. alveolaris superior posterior.
- A. masseterica, aa. pterygoideus medialis et lateralis, aa. temporales profundae, a. buccalis, a. alveolaris.
- Superior posterior.

44. Identify the branches of the second part of a. maxillaris?

- + A. masseterica, aa. pterygoideus medialis et lateralis, aa. temporales profundae, a. buccalis, a. alveolaris.
- Superior posterior.
- A. meningea media, a. alveolaris inferior, palatina descendens.
- A. auricularis profunda, a. tympanica anterior, a. alveolaris inferior, a. meningea media.

45. Identify the branches of the third third part of a. maxillaris?

- + A. palatina descendens, a. infraorbitalis, a. sphenopalatina.
- A. masseterica, a. buccalis, a. meningea media, a. alveolaris inferior.

- A. alveolaris superior posterior.
- A. auricularis profunda, a. tympanica anterior, a. alveolaris inferior, a. meningea media.

46. Identify the external border of interpterygoid space?

- + Branch of mandible, m. pterygoideus lateralis.
- M. pterygoideus medialis.
- M. temporalis.
- M. masseter.

47. What is interpterygoid space internally limited by?

- + M. pterygoideus medialis.
- M. pterygoideus lateralis.
- Lamina lateralis processus pterygoideus.
- Branch of mandible, m. pterygoideus lateralis.

48. What is interpterygoid space from above limited by?

- + Base of the skull.
- M. pterygoideus medialis.
- M. pterygoideus lateralis.
- External acoustic meatus.

49. What is interpterygoid space from behind limited by?

- + Parotid gland.
- Branch of mandible, m. pterygoideus lateralis.
- M. sternocleidomastoideus.
- Venter posterior m. digastricus.

50. Identify the front border of interpterygoid space?

- + Buccal fat pad of cheek, tuber maxillae.
- M. pterygoideus medialis.
- M. pterygoideus lateralis.
- M. masseter.

51. What is interpterygoid space composed of?

- + N. mandibularis, a. maxillaris, plexus pterygoideus.
- Adipose tissue, n. maxillaris, a. maxillaris, ganglion pterygopalatinum.

- M. pterygoideus lateralis, m. temporalis.
- N. mandibularis, v. retromandibularis, glandula parotis.

52. Identify the anterior wall of fossa pterygopalatina?

- + Tuber maxillae.
- Processus pterygoideus.
- M. masseter.
- Branch of mandible.

53. Identify the posterior wall of fossa pterygopalatina?

- + Processus pterygoideus.
- Glandula parotis.
- Tuber maxillae.
- Branch of mandible.

54. Identify the medial wall of fossa pterygopalatina?

- + Lamina perpendicularis ossis palatini.
- Processus pterygoideus.
- Tuber maxillae.
- Lamina lateralis processus pterygoideus.

55. What does fossa pterygopalatina communicate with?

- + Canalis palatinus major.
- Infracranial fossa.
- Canalis pterygoideus.
- Temporal pterygoid space.

56. Identify the contents of fossa pterygopalatina?

- + Adipose tissue, n. maxillaris, a. maxillaris, ganglion pterygopalatinum.
- N. mandibularis, a. maxillaris, plexus pterygoideus.
- M. pterygoideus lateralis, m. temporalis.

- N. mandibularis, v. retromandibularis, glandula parotis.

57. Though what foramen of the skull does n. maxillaris penetrate into pterygopalatine fossa of n. maxillaris?

- + Foramen rotundum.
- Foramen ovale.
- Foramen spinosus.
- Fissura orbitalis superior.

58. Identify the branches of n. maxillaris?

- + N. zygomaticus, n. infraorbitalis, nn. pterygopalatini.
- N. supraorbitalis, n. auriculotemporalis, n. lingualis.
- N. alveolaris inferior.
- Nn. palpebrales inferiores, rr. nasales, rr. labiales superiores.

59. Identify the branches of pes anserinus minor?

- + Nn. palpebrales inferiores, rr. nasales, rr. labiales superiores.
- Rr. temporales, rr. zygomatici, rr. buccales, r. marginalis mandibulae, r. colli
- N. zygomaticus, n. infraorbitalis, nn. pterygopalatini.
- N. supraorbitalis, n. auriculotemporalis, n. lingualis.

60. What is the anterior parapharyngeal space internally limited by?

- + M. levator velli palatini, m. tensor velli palatini, m. constrictor pharyngis superior, fascia pharyngobasilaris, tonsilla palatina.
- M. pterygoideus medialis.
- M. pterygoideus lateralis.
- Pharyngoprevertebral aponeurosis.

61. What is the anterior parapharyngeal space externally limited by?

- + M. pterygoideus medialis.
- M. pterygoideus lateralis.
- M. levator velli palatini, m. tensor velli palatini, m. constrictor pharyngis superior, fascia pharyngobasilaris, tonsilla palatina.
- M. temporalis.

62. What is the anterior parapharyngeal space from behind limited by?

- + Aponeurosis stylopharyngeus.
- Aponeurosis pharyngoprevertebralis.
- M. levator velli palatini, m. tensor velli palatini, m. constrictor pharyngis superior, fascia pharyngobasilaris, tonsilla palatina.
- M. sternocleidomastoideus.

63. Identify the upper border of the front parapharyngeal space?

- + Base of the skull.
- External acoustic meatus.
- Zhonesko's diaphragm.
- Aponeurosis pharyngoprevertebralis.

64. Identify the lower border of the front parapharyngeal space?

- + Capsule of submandibular salivary gland.
- Aponeurosis stylopharyngeus.
- Aponeurosis pharyngoprevertebralis.
- Gl. parotis.

65. What is the anterior parapharyngeal space composed of?

- + A. palatina ascendens, vv. pharyngea, pl. pharyngeus.
- N. mandibularis, a. carotis interna, v. jugularis interna.
- N. vagus, n. accessorius.
- All the listed above.

66. What is the posterior parapharyngeal space internally limited by?

- + Aponeurosis pharyngopevertebralis.
- Styloid process, muscles of anatomical Riolan's bouquet (m. stylopharyngeus, m. styloglossus, m. stylohyoideus), aponeurosis stylopharyngeus.
- Prevertebral fascia.
- Aponeurosis stylopharyngeus.

67. What is posterior parapharyngeal space externally limited by?

- + Styloid process, m. digastricus, m. sternocleidomastoideus.
- M. pterygoideus medialis.
- M. pterygoideus lateralis.
- M. masseter.

68. Identify the posterior wall of posterior parapharyngeal space?

- + Prevertebral fascia.
- Aponeurosis stylopharyngeus.
- Styloid process, m. digastricus, m. sternocleidomastoideus, gl. parotis.
- Aponeurosis pharyngopevertebralis.

69. Identify the anterior wall of posterior parapharyngeal space?

- + Styloid process, muscles of anatomical Riolan's bouquet (m. stylopharyngeus, m. styloglossus, m. stylohyoideus), aponeurosis stylopharyngeus.
- Tuber maxillae.
- Aponeurosis pharyngoprevertebralis.
- Prevertebral fascia.

70. What is the posterior parapharyngeal space composed of?

- + All the listed below.
- A. carotis interna, v. jugularis interna.
- N. glossopharyngeus, n. vagus, n. accessorius, n. hypoglossus.
- Upper cervical ganglion of truncus sympathicus.

71. Identify the author of extraoral anesthesia of upper and lower mandibular nerves?

- + Weisblatt.
- Lukashevych-Oberst.
- Kulenkampff.
- Braun-Usoltseva.

72. What vessels pass through the thickness of the anterior wall of maxillary sinus?

- + Aa. alveolares superiores anteriores.
- A. infraorbitalis.
- Palatina ascendens.
- Palatina descendens.

73. Which vessels are attached to the posterior wall of maxillary sinus?

- + A. infraorbitalis, a. palatina descendens, a. alveolaris superior posterior.
- A. facialis.
- A. palatina ascendens.
- A. sphenopalatina.

74. What passes through the thickness of the upper wall of maxillary sinus?

- + Infraorbital nerve and arteries.
- Supraorbital nerve and arteries.
- A. et v. angularis.
- A. et v. sphenopalatina.

75. Identify the most widely spread method of maxillary sinusotomy at chronic maxillitis?

- + Caldwell-Luc operation.
- Killian's operation.
- Ritter-Janson's operation.
- Limberg's operation.

76. What method is the most frequently used to dissect frontal fossa when it is suppurated?

- + Ritter-Janson's technique.
- Caldwell-Luc technique.
- Killian's technique.
- Limberg's technique.

77. In a patient with maxillitis developed burning pain in the lateral region of the face, rhinorrhea, lacrimation, ptyalism, swelling and hyperemia of the eyelids. What complication is likely to occur?

+ Ganglioneuritis of pterygopalatine node, Sluder's syndrome.

– Full ophthalmoplegia, exophthalmus, ptosis, Foix syndrome.

– Mackenzie's syndrome.

– Villaret's syndrome.

78. Where is masseteric cellular space located?

+ Between the branch of mandible and masseteric muscle.

– Between external pterygoid and masseteric muscles.

– Between internal pterygoid and masseteric muscles.

– Between buccal and masseteric muscles.

79. What is located in submasseteric cellular tissue?

+ N. massetericus, a. et v. masseterica.

– A. et v. masseterica and n. buccalis.

– R. marginalis mandibulae.

– There is no right answer.

80. What anatomical formation connects temporal pterygoid space with cellular tissue of pterygoid fossa?

- + Fissura pterygomaxillaris.
- Foramen rotundum.
- Fissura orbitalis superior.
- Foramen ovale.

81. What anatomical formation connects temporal pterygoid space with cellular tissue of the orbit?

- + Fissura orbitalis inferior.
- Fissura orbitalis superior.
- Canalis pterygoideus.
- Foramen rotundum.

82. What anatomical formations join temporal pterygoid space with the cranial cavity?

- + Foramen ovale and foramen spinosum.
- Foramen rotundum and fissura orbitalis superior.
- Fissura orbitalis inferior.
- Fissura pterygomaxillaris.

83. What anatomical formations join temporal pterygoid space with submasseteric space?

- + A. et v. masseterica.
- A. maxillaris.
- Foramen ovale.
- Fissura orbitalis superior.

84. What anatomical formation joins temporal pterygoid space with the bed of parotid gland?

- + A. maxillaris.
- Ductus parotideus.
- Fissura pterygomaxillaris.
- Fissura orbitalis superior.

85. What joins cellular tissue of anterior parapharyngeal space with the bed of parotid gland?

- + Pharyngeal process of gl. parotis.
- Fissura pterygomaxillaris.
- Ductus parotideus.
- A. maxillaris.

86. What anatomical formations join cellular tissue of posterior parapharyngeal space with upper mediastinum?

- + A. carotis interna, v. jugularis interna and n. vagus.
- N. accessorius.
- N. hypoglossus.
- N. glossopharyngeus.

87. What anatomical formation joins cellular tissue of posterior parapharyngeal space with posterior mediastinum?

- + N. vagus.
- Esophagus.
- N. hypoglossus.
- Pharynx.

88. What anatomical formations join cellular tissue of posterior parapharyngeal space with spatium vasonervorum?

- + A. carotis interna, v. jugularis interna and n. vagus.
- N. glossopharyngeus and n. accessorius.
- V. jugularis externa.
- N. auriculotemporalis.

89. What anatomical formation joins cellular tissue of posterior parapharyngeal space with the posterior cranial fossa?

- + V. jugularis interna.
- A. carotis interna.
- A. vertebralis.
- N. facialis.

90. What anatomical formation joins cellular tissue of posterior parapharyngeal space with the middle cranial fossa?

- + A. carotis interna.
- V. jugularis interna.
- N. vagus.
- N. facialis.

Test questions and answers for practical lesson № 4

1. Identify the upper boundary of carotid triangle:
 - + Posterior venter of m. digastricus;
 - Sternocleidomastoid muscle;
 - Anterior venter of m. digastricus;
 - Inferior venter of m. omohyoideus.

2. What is carotid triangle limited externally by:
 - + M. sternocleidomastoideus;
 - Posterior venter of m. digastricus;
 - Superior venter of m. omohyoideus;
 - Inferior venter of m. omohyoideus?

3. What is carotid triangle limited from below by:
 - + Superior venter of m. omohyoideus;
 - Inferior venter of m. omohyoideus;
 - M. sternocleidomastoideus;
 - Posterior venter of m. digastricus?

4. Identify the upper boundary of trigonum omotracheale:
 - + Superior venter of m. omohyoideus;
 - M. sternocleidomastoideus;
 - Anterior venter of m. digastricus;
 - Inferior venter of m. omohyoideus.

5. Identify the external wall of trigonum omotracheale:
 - + M. sternocleidomastoideus;
 - Superior venter of m. omohyoideus;
 - Inferior venter of m. omohyoideus;
 - Anterior venter of m. digastricus.

6. Identify the middle border of trigonum omotracheale:
 - + Middle line of the neck;
 - Superior venter of m. omohyoideus;

- Anterior venter of m. digastricus;
- M. sternocleidomastoideus.

7. Identify the posterior boundary of trigonum omotracheoideum:

- + M. trapezius;
- M. sternocleidomastoideus;
- Inferior venter of m. omohyoideus;
- Posterior venter of m. digastricus.

8. Identify the anterior boundary of trigonum omotracheoideum:

- + M. sternocleidomastoideus;
- Superior venter of m. omohyoideus;
- Inferior venter of m. omohyoideus;
- Posterior venter of m. digastricus.

9. Identify the lower boundary of trigonum omotracheoideum:

- + Inferior venter of m. omohyoideus;
- Posterior venter of m. digastricus;
- M. trapezius;
- M. sternocleidomastoideus.

10. Identify the upper boundary of trigonum omoclaviculare:

- + Inferior venter of m. omohyoideus;
- Superior venter of m. omohyoideus;
- Posterior venter of m. digastricus;
- M. sternocleidomastoideus.

11. Identify the anterior boundary of trigonum omoclaviculare:

- + M. sternocleidomastoideus;
- Middle line of the neck;
- Inferior venter of m. omohyoideus;

– Clavicle.

12. Identify the lower boundary of trigonum omoclaviculare:

+ Clavicle;

– M. sternocleidomastoideus;

– Inferior venter of m. omohyoideus;

– M. trapezius.

13. Identify fascia of submandibular triangle:

+ Fascia colli superficialis, lamina superficialis fasciae colli propriae;

– Lamina superficialis fasciae colli propriae, lamina profunda fasciae colli propriae;

– Lamina profunda fasciae colli propriae, fascia colli superficialis;

– Fascia endocervicalis, fascia prevertebralis.

14. Identify fascia of carotid triangle:

+ Fascia colli superficialis, lamina superficialis fasciae colli propriae, fascia endocervicalis, fascia prevertebralis;

– Fascia colli superficialis, lamina superficialis fasciae colli propriae, lamina profunda fasciae colli propriae, fascia endocervicalis;

– Fascia colli superficialis, lamina superficialis fasciae colli propriae, lamina profunda fasciae colli propriae, fascia prevertebralis;

– Fascia colli superficialis, lamina superficialis fasciae colli propriae, lamina profunda fasciae colli propriae, fascia endocervicalis, fascia prevertebralis.

15. Identify fascia that is not a part of trigonum omotracheale:

+ Fascia thoracolumbalis;

– Fascia colli superficialis;

– Fascia endocervicalis;

– Fascia prevertebralis.

16. Identify fascia of trigonum omotracheoideum:

- + Fascia colli superficialis, lamina superficialis fasciae colli propriae, fascia prevertebralis;
- Fascia colli superficialis, lamina superficialis fasciae colli propriae, lamina profunda fasciae colli propriae;
- Fascia colli superficialis, lamina superficialis fasciae colli propriae, fascia endocervicalis;
- Fascia colli superficialis, fascia endocervicalis, fascia prevertebralis.

17. Identify fascia which is not a part of trigonum omoclaviculare:

- + Fascia endocervicalis;
- Fascia colli superficialis;
- Fascia prevertebralis;
- Lamina superficialis fasciae colli propriae.

18. What fascia forms a compartment for m. platysma:

- + Fascia colli superficialis;
- Lamina superficialis fasciae colli propriae;
- Fascia prevertebralis;
- Lamina profunda fascia colli propriae?

19. What fascia forms a compartment for sternocleidomastoid muscle:

- + Lamina superficialis fasciae colli propriae;
- Fascia prevertebralis;
- Lamina profunda fasciae colli propriae;
- Fascia colli superficialis?

20. What fascia forms a capsule of submandibular gland:

- + Lamina superficialis fasciae colli propriae;
- Lamina profunda fasciae colli propriae;
- Fascia colli superficialis;
- Fascia endocervicalis?

21. What fascia forms muscle sheath located below hyoid bone:

- + Lamina profunda fasciae colli propriae;
- Lamina superficialis fasciae colli propriae;
- Fascia colli superficialis;
- Fascia prevertebralis?

22. What fascia forms the sheath of neurovascular bundle of the neck:

- + Parietal leaf of internal cervical fascia;
- Visceral leaf of f. endocervicalis;
- Fascia prevertebralis;
- Lamina profunda fasciae colli propriae?

23. What fascia forms the sheath of scalene muscles:

- + Fascia prevertebralis;
- Fascia endocervicalis;
- Parietal leaf of f. endocervicalis;
- Lamina profunda fasciae colli propriae?

24. What fascia forms the sheath of a. et. v. subclavia and plexus brachialis:

- + Fascia prevertebralis;
- Parietal leaf of f. endocervicalis;
- Visceral leaf of f. endocervicalis;
- Lamina profunda fasciae colli propriae?

25. What is identified in the interaponeurotic space:

- + Arcus venosus juguli;
- V. jugularis anterior;
- V. jugularis externa;
- V. jugularis interna?

26. What cellular tissue is located between the leaves of the second and third fascia of the neck above the jugular incisure of sternum:

- + Spatium interaponeuroticum suprasternale;
- Gruber cul-de-sac;
- Spatium pretracheale;
- Spatium vasonervorum?

27. What dissection is used to reveal abscess of episternal interaponeurotic space:

- + Transversal dispart above the jugular incisure of sternum;
- Middle line of the neck;
- Along the anterior margin of sternocleidomastoid muscle;
- Along the posterior margin of sternocleidomastoid muscle?

28. What cellular tissue is identified behind the space of sternocleidomastoid muscle between the II and III fascia of the neck:

- + Gruber cul-de-sac;
- Spatium interaponeuroticum suprasternale;
- Spatium pretracheale;
- Spatium retroviscerale?

29. What cellular tissue is identified between the parietal and visceral leaves of the IV fascia of the neck:

- + Spatium previscerale;
- Spatium retroviscerale;
- Spatium vasonervorum;
- Spatium prevertebrale?

30. What is identified in spatium pretracheale:

- + Plexus venosus thyroideus impar, a. thyroidea ima, truncus brachiocephalicus, a. carotis communis dextra, thymus;
- Plexus venosus thyroideus impar, a. subclavia, a. thyroidea ima, truncus brachiocephalicus, thymus;

- Plexus venosus thyroideus impar n. phrenicus, a. thyroidea ima, truncus brachiocephalicus, thymus;
- Plexus venosus thyroideus impar, a. thyroidea ima, truncus brachiocephalicus, a. subclavia, n. phrenicus?

31. What dissection is used to reveal abscess of previsceral cellular space:

- + Transverse incision 2 cm above the jugular incisure of sternum;
- Middle line on the neck;
- De Quervain's incision;
- Kiuttner's incision?

32. What incision is used to reveal submandibular abscess:

- + 2 cm from the margin of the lower jaw;
- Incision at the level of upper margin of the thyroid cartilage to the anterior margin of the sternocleidomastoid muscle;
- Incision at the level of upper margin of the thyroid cartilage and further along the anterior margin of sternocleidomastoid muscle;
- Kocher's incision?

33. What incision is used to reveal abscess of sternocleidomastoid muscle (Bezold's abscess):

- + Incision at the level of upper margin of the thyroid cartilage and further along the anterior margin of sternocleidomastoid muscle above the swelling;
- Kocher's incision;
- Transverse incision 2 cm above the jugular incisure of sternum;
- Incision from the upper margin of the thyroid cartilage to the middle line of the neck?

34. What incision is used to reveal abscess of lateral triangle of the neck:

- + Incision above the collarbone and parallel from the posterior margin of sternocleidomastoid muscle to the anterior margin of trapezius muscle;
- Incision from the upper margin of the thyroid cartilage and further along the anterior margin of sternocleidomastoid muscle;
- Incision under the collarbone dissecting the skin layer-by-layer, subcutaneous cellular tissue, and subcutaneous muscle;
- Arciform incision (Kiuttner's incision)?

35. What incision is used to reveal abscess of retrovisceral cellular space:

- + Incision at the level of upper margin of the thyroid cartilage and further along the anterior margin of sternocleidomastoid muscle;
- Transverse incision 2 cm above the jugular incisure of sternum along the middle line of the neck;
- Kocher's incision?

36. How can the abscess of neurovascular fascicle in cellular space be revealed:

- + Incision is performed on the anterior or posterior margin of sternocleidomastoid muscle;
- Kocher's incision;
- Transverse incision 2 cm above the jugular incisure of sternum over the collarbone and parallel from the posterior;
- Margin of sternocleidomastoid muscle to the anterior margin of trapezius muscle?

37. What is identified in the cellular tissue of lateral triangle between the II and V fascia of the neck:

- + V. jugularis externa, n. accessorius, nn. supraclavicularis, a. et v. cervicalis superficialis;
- V. jugularis externa, n. accessorius, nn. supraclavicularis, a. et v. cervicalis superficialis, a. et v. suprascapularis;

- V. jugularis externa, a. et v. subclavia, plexus brachialis n. accessorius, nn. supraclavicularis;
- V. jugularis externa, a. et v. subclavia, a. et v. cervicalis superficialis, a. et v. cervicalis suprascapularis, n. accessorius?

38. What is identified in the cellular tissue of lateral triangle between the III and V fascia of the neck:

- + V. jugularis externa, a. et v. cervicalis superficialis, a. et v. suprascapularis;
- V. jugularis externa, a. et v. cervicalis superficialis, a. et v. suprascapularis, nn. supraclaviculares, n. accessorius;
- V. jugularis externa, a. et v. cervicalis superficialis, n. accessorius, mm. scalene anterior, middle et posterior;
- V. jugularis externa, a. et v. cervicalis superficialis, a. et v. suprascapularis, a. et v. subclavia, plexus brachialis?

39. What is identified under the V fascia in tr. omoclaviculare:

- + A. et v. subclavia, plexus brachialis;
- A. et v. subclavia, plexus brachialis, a. et v. suprascapularis;
- A. et v. subclavia, plexus brachialis, a. et v. cervicalis superficialis;
- A. et v. subclavia, plexus brachialis, a. et v. cervicalis superficialis, a. et v. suprascapularis?

40. What is identified in spatium prevertebrale:

- + Mm. longus colli, mm. longus capitis, truncus sympathicus;
- Mm. longus colli, mm. longus capitis, a. et v. subclavia;
- Mm. longus colli, mm. longus capitis, a. et v. subclavia, pl. brachialis;
- Mm. longus colli, mm. longus capitis, truncus sympathicus, pl. brachialis?

41. What is identified in the cellular tissue of submandibular triangle:

- + N. transversus colli;
- N. transversus colli, r. marginalis mandibulae;
- N. transversus colli, r. marginalis mandibulae, v. jugulis externa;
- N. transversus colli, r. marginalis mandibulae, a. et v. facialis?

42. What is identified under the superficial leaf of the II fascia of the neck in submandibular triangle:

- + R. marginalis mandibulae, a. et v. facialis, a. et v. submentalis, n. mylohyoideus, lymph nodes, glandula submandibularis;
- A. et v. facialis, glandula submandibularis, n. mylohyoideus, n. transversus colli, a. et v. submentalis;
- A. et v. facialis, r. marginalis mandibulae, glandula submandibularis, a. et v. submentalis?

43. What are the possible ways of transmission of pus from retrovisceral space:

- + To retropharyngeal space and upper mediastinum;
- In spatium vasonervorum and upper mediastinum;
- In spatium interscalenum and lateral triangle of the neck;
- In spatium antescalenum and upper mediastinum?

44. What cellular spaces are connected with upper mediastinum:

- + Spatium vasonervorum, spatium previscerale, spatium retroviscerale;
- Spatium vasonervorum, spatium previscerale, spatium prevertebrale;
- Spatium previscerale, spatium retroviscerale;
- Spatium vasonervorum, spatium previscerale, spatium retroviscerale, spatium prevertebrale, Gruber cul-de-sac?

45. By what is the bed of submandibular gland limited from above:

- + Submandibular fossa of lower jaw;
- M. mylohyoideus, m. hyoglossus;
- Parotid salivary gland;
- Anterior and posterior venter of m. digastricus?

46. By what is the bed of submandibular gland limited from below:

- + Anterior and posterior venter of m. digastricus;
- Fossa submandibularis;
- M. mylohyoideus, m. hyoglossus;
- N. hypoglossus?

47. By what is the bed of submandibular gland limited from behind:

- + Parotid salivary gland;
- Fossa submandibularis;
- M. mylohyoideus;
- Posterior venter of m. digastricus?

48. What is the bed of submandibular gland limited by medially by:

- + M. mylohyoideus, m. hyoglossus;
- Parotid gland;
- Fossa submandibularis;
- Anterior and posterior venter of m. digastricus?

49. Between what muscles does the excretory duct of submandibular gland pass:

- + M. mylohyoideus and m. hyoglossus;
- M. mylohyoideus and posterior venter of m. digastricus;
- M. mylohyoideus and m. constrictor pharyngis medius;
- M. hyoglossus and m. constrictor pharyngis medius?

50. What runs exactly above the duct of submandibular gland:

- + N. lingualis;
- N. hypoglossus;
- A. lingualis;
- V. lingualis?

51. What runs below the duct of submandibular gland:

- + N. hypoglossus, v. lingualis;
- N. lingualis;
- A. lingualis;
- R. marginalis mandibulae?

52. What is the anatomic landmark for identifying the lingual artery:

- + Pirogov triangle;
- Wharton's duct;
- Posterior venter of m. digastricus;
- N. hypoglossus?

53. What is the pus transmitted by connecting the bottom of the oral cavity with the bed of submandibular gland:

- + Through Wharton's duct and anterior process of gl. submandibularis;
- Through Stenon's duct;
- N. lingualis;
- N. hypoglossus?

54. What supplies gl. submandibularis with blood:

- + Rr. glandulares, a. facialis, a. sublingualis, a. lingualis;
- A. palatina ascendens;
- A. submentalialis, a. facialis;
- A. facialis, a. pharyngea ascendens?

55. What is identified under the leaf of the II fascia of the neck in submandibular triangle:

- + Anterior process of submandibular gland, Wharton's duct, n. hypoglossus, v. lingualis, n. lingualis;
- Wharton's duct, n. lingualis, n. hypoglossus, a. lingualis;
- Wharton's duct, a. lingualis, n. hypoglossus, anterior process of gl. submandibularis, v. lingualis;
- Stenon's duct, n. hypoglossus, n. lingualis, v. lingualis, a. lingualis?

56. What is submandibular triangle limited from above by:

- + Inferior margin of the lower jaw;
- Anterior venter of m. digastricus;
- Posterior margin of m. sternocleidomastoideus;
- Posterior venter of m. digastricus?

57. What is submandibular triangle limited from the front by:

- + Anterior venter of m. digastricus;
- Posterior venter of m. digastricus;
- Inferior margin of the mandible;
- Posterior margin of m. sternocleidomastoideus?

58. What is submandibular triangle limited from behind by:

- + Posterior venter of m. digastricus;
- Inferior venter of m. omohyoideus;
- Anterior margin of m. sternocleidomastoideus;
- Anterior venter of m. digastricus?

59. What muscles compose the floor of submandibular triangle:

- + M. mylohyoideus, m. hyoglossus;
- Anterior and posterior venter of m. digastricus;
- M. stylohyoideus, m. mylohyoideus;
- M. hyoglossus, m. digastricus?

60. Identify the boundaries of Pirogov's triangle from the anterior:

- + M. mylohyoideus;
- Tendon of m. digastricus;
- N. hypoglossus;
- M. hyoglossus.

61. Identify the boundaries of Pirogov's triangle from below:

- + Tendon of m. digastricus;
- M. mylohyoideus;
- N. hypoglossus;
- M. hyoglossus.

62. Identify the boundaries of Pirogov's triangle from above:

- + N. hypoglossus, v. lingualis;
- Tendon of m. digastricus;
- M. mylohyoideus;
- M. hyoglossus.

63. Identify the bottom of Pirogov's triangle:

- + M. hyoglossus;
- M. mylohyoideus;
- M. constrictor pharyngis medius;
- M. stylohyoideus.

64. Between what muscles does a. lingualis in Pirogov's triangle pass:

- + Between m. hyoglossus and m. constrictor pharyngis middle;
- Between m. mylohyoideus and m. hyoglossus;
- Between m. constrictor pharyngis superior and m. hyoglossus;
- Between m. digastricus and m. mylohyoideus?

65. What is necessary to do to identify a. lingualis in Pirogov's triangle:

- + To split the muscle fibers of m. hyoglossus bluntly;
- To lead away m. digastricus;
- To dissect m. mylohyoideus;
- To drag away n. hypoglossus?

66. How is excretory duct of submandibular salivary gland called according to its author:

- + Wharton's duct;
- Stenon's duct;
- Virsung's duct;
- Botalov's duct.

67. What is identified in subcutaneous cellular tissue of carotid triangle:

- + N. transversus colli, r. colli n. facialis;
- R. marginalis mandibulae, n. transversus colli;
- V. jugularis externa, n. transversus colli;
- Nn. supraclavicularis, n. transversus colli, r. colli n. facialis?

68. What passes between the I and II fascia of the neck in cellular tissue of carotid triangle:

- + N. transversus colli, r. colli n. facialis, v. jugularis externa;
- N. transversus colli, r. colli n. facialis, r. marginalis mandibulae;
- N. transversus colli, nn. supraclavicularis, v. jugularis externa;
- N. transversus colli, rr. colli n. facialis, r. marginalis mandibulae, v. jugularis externa?

69. What is a part of major neurovascular bundle of the neck:

- + V. jugularis interna, a. carotis communis, n. vagus;
- V. jugularis externa, a. carotis communis, n. vagus;

- V. jugularis interna, a. carotis interna, n. vagus;
- V. jugularis interna, a. carotis communis, n. phrenicus?

70. Which of the elements of major neurovascular bundle of the neck is identified superficially and externally:

- + V. jugularis interna;
- A. carotis communis;
- N. vagus;
- V. jugularis externa?

71. Identify the empty of v. jugularis interna in carotid triangle:

- + V. facialis communis, v. lingualis, v. thyroidea superior, vv. pharyngeae;
- V. temporalis superficialis, v. facialis communis, v. thyroidea superior, v. lingualis;
- V. facialis, v. lingualis, v. retromandibularis, v. thyroidea superior;
- V. facialis, v. lingualis, vv. pharyngeae, v. jugularis externa.

72. How does vagus nerve branch off in the carotid triangle:

- + Rr. pharyngei, n. laryngeus superior, rr. cardiaci superiores;
- Rr. laryngeus recurrens, rr. cardiaci superiores, rr. pharyngei;
- Rr. cardiaci superiores, n. transversus colli, n. laryngeus superior;
- Nn. supraclaviculares, n. laryngeus superior, rr. cardiaci superiores.

73. What receptors compose carotid reflexogenic area:

- + Sinus carotidus, glomus caroticum;
- Sinus caroticum;
- Glomus caroticum;
- Sinus caroticum, glomus caroticum, arcus aortae, truncus pulmonalis?

74. What nerves are involved into formation of reflexogenic area:

- + N. glossopharyngeus, n. vagus, truncus sympathicus;
- N. glossopharyngeus, n. vagus, truncus sympathicus, n. phrenicus;
- Wrisberg nerve, Vidian nerve;
- N. vagus, truncus sympathicus?

75. What surgical operation is performed at severe case of bronchial asthma:

- + Nakayama's operation;
- Vanakh's operation;
- Coldwell-Luck's operation;
- Ritter-Yanson's operation?

76. What muscle covers common carotid artery within the carotid triangle:

- + M. platysma;
- M. sternocleidomastoideus;
- M. sternohyoideus;
- M. omohyoideus?

77. Identify the projection of common carotid artery:

- + From sternoclavicular joint to the middle distance between the angle of mandible and mastoid process;
- From jugular incisure to the angle of mandible;
- From jugular incisure to the mastoid process;
- From sternoclavicular joint to the angle of mandible.

Test questions and answers for practical lesson № 5

1. What runs between the I and II fascia of the neck in sternoclavicular mastoid region:

+ V. jugularis externa, n. transversus colli, n. auricularis magnus, n. occipitalis minor, nn. supraclaviculares;

– V. jugularis externa, n. transversus colli, n. auricularis magnus, a. cervicalis superficialis, n. occipitalis minor;

– V. jugularis externa, n. transversus colli, r. colli n. facialis, nn. supraclaviculares, n. occipitalis minor;

– V. jugularis externa, a. cervicalis superficialis, n. occipitalis minor, nn. supraclaviculares, n. auricularis magnus?

2. What is identified on the anterior wall of common carotid artery:

+ Radix superior n. hypoglossus, cardiac branches of vagus nerve, cardiac branches of sympathetic trunk;

– N. phrenicus, cardiac branches of sympathetic trunk, radix superior n. hypoglossus;

– N. accessorius, cardiac branches of sympathetic trunk;

– Radix superior n. hypoglossus, cardiac branches of vagus nerve and sympathetic trunk, a. cervicalis ascendens?

3. What is identified beneath the IV fascia of the neck in anterior and outside from v. jugularis interna and a. carotis communis in the middle third of sternocleidomastoid region:

+ Ansa cervicalis;

– N. accessorius;

– N. transversus colli;

– A. et v. cervicalis superficialis?

4. Identify the branches of cervical plexus:

+ N. transversus colli, n. auricularis magnus, n. occipitalis minor, nn. supraclaviculares, n. phrenicus;

- N. transversus colli, n. auricularis magnus, n. occipitalis minor, n. occipitalis major, nn. supraclaviculares;
- N. transversus colli, n. suprascapularis, n. auricularis magnus, n. occipitalis minor, n. phrenicus;
- N. transversus colli, n. occipitalis minor, n. auricularis posterior, nn. supraclaviculares, n. phrenicus.

5. Where is the superior cervical sympathetic ganglion of sympathetic trunk identified:

- + On m. longus capitis at the level of transverse processes of the II–IV cervical vertebrae behind the internal carotid artery middlely from n. vagus;
- On m. longus colli at the level of transverse processes of the II–IV cervical vertebrae behind the internal carotid artery in anterior of n. vagus;
- On m. longus capitis at the level of transverse processes of the II–IV cervical vertebrae behind the internal carotid artery outside of n. vagus;
- On m. longus colli at the level of transverse processes of the II–IV cervical vertebrae in front of the internal carotid artery outside n. vagus?

6. Where is the middle cervical ganglion of sympathetic trunk identified:

- + On m. longus colli at the level of the VI cervical vertebra above the arch of a. thyroidea inferior;
- On m. longus capitis at the level of transverse processes of the II–IV cervical vertebrae behind the internal carotid artery;
- On m. longus colli at the level of the VI cervical vertebra behind the internal carotid artery middlely from n. vagus;
- On m. longus capitis at the level of the VI cervical vertebra in front of a. vertebralis?

7. Where is the intermediate cervical ganglion of sympathetic trunk identified:

- + Anterior surface of vertebral artery at the level of the VII cervical vertebra;
- Behind vertebral artery at the level of the head of the I rib;
- Behind internal carotid artery at the level of the head of the I rib;
- In anterior of a. subclavia at the level of the head of the I rib?

8. Where is the inferior cervical ganglion of sympathetic trunk identified:

- + In scalene vertebral triangle at the level of the head of the I rib the behind vertebral artery and a. subclavia middlely to truncus thyreocervicalis;
- In scalene vertebral triangle at the level of the VII cervical vertebra in anterior of vertebral artery laterally to truncus thyreocervicalis;
- In spatium antescalenum at the level of the head of the I rib in front of a. vertebralis laterally to truncus thyreocavicalis;
- In scalene vertebral triangle at the level of the head of the I rib in front of a. vertebralis medially to truncus thyreocervicalis?

9. What is observed at cervical osteochondrosis resulted from compression of vertebral artery and sympathetic plexus:

- + Barre–Lieou syndrome;
- Foix syndrome;
- Horner’s syndrome;
- Willaret’s syndrome?

10. What is the Barre–Lieou syndrome characterized by:

- + Ache and parasthesia in the head and neck, dizziness, tinnitus, reduced eyesight;
- Ache and parasthesia in the head and neck, torticollis, ptosis, mydriasis;
- Ache and parasthesia in the head and neck, anisocoria, exopthalmususususus, reduced eyesight;

– Ache and parasthesia in the head and neck, dizziness, ptosis, exophtalmus?

11. What is observed at irritation of sympathetic fibers in the cervical region:

- + Petit's syndrome;
- Barre–Lieou's syndrome;
- Willaret's syndrome;
- Foix syndrome?

12. What is Petit's syndrome characterized by:

- + Exophtalmus, mydriasis, dilatation of palpebral fissure;
- Exophtalmus, miosis, constriction of palpebral fissure;
- Exophtalmus, miosis, dilatation of palpebral fissure;
- Exophtalmus, torticollis, mydriasis?

13. What is observed when sympathetic trunk of the neck is injured:

- + Claude Bernard–Horner syndrome;
- Foix syndrome;
- Willaret's syndrome;
- Barre–Lieou's syndrome?

14. What is Horner–Claude Bernard's syndrome characterized by:

- + Miosis, constriction of palpebral fissure, exophtalmus, hyperemia of face, bradycardia;
- Mydriasis, dilatation of palpebral fissure, hyperemia of face, bradycardia;
- Miosis, exophtalmus, tachycardia, dilatation of palpebral fissure, hyperemia of face;
- Mydriasis, constriction of palpebral fissure, retraction of the pupil, tachycardia?

15. Where is the solution of Novocain injected at vagosympathetic block according to O. V. Vyshnevskyi:

- + In the cellular tissue surrounding superior cervical ganglion of sympathetic trunk, truncus sympathicus, n. vagus;
- In the cellular tissue surrounding inferior cervical ganglion of sympathetic trunk, Vieussens loop, n. phrenicus;
- In the cellular tissue surrounding superior cervical ganglion of sympathetic trunk, n. phrenicus, cervical plexus;
- In the cellular tissue surrounding superior cervical ganglion of sympathetic trunk, cervical plexus, n. vagus, n. phrenicus?

16. What is spatium antescalenum limited in front and externally by:

- + M. sternocleidomastoideus, m. omohyoideus;
- M. sternohyoideus, m. sternothyreoideus;
- M. scalenus anterior, m. omohyoideus;
- M. sternocleidomastoideus, m. scalenus anterior?

17. What is spatium antescalenum limited by in front and medially:

- + M. sternohyoideus, m. sternothyreoideus;
- M. sternocleidomastoideus, m. omohyoideus;
- M. sternocleidomastoideus, m. sternohyoideus;
- M. sternohyoideus, m. scalenus anterior?

18. What is spatium antescalenum limited from behind by:

- + M. scalenus anterior;
- M. scalenus medius;
- M. scalenus posterior;
- M. longus colli?

19. What is spatium antescalenum composed of:

- + Bulbus v. jugularis interna, v. subclavia, sinister ductus thoracicus, n. vagus, a. carotis communis;

- N. phrenicus, a. cervicalis, a. ascendens, a. suprascapularis, a. cervicalis superficialis;
- Bulbus v. jugularis interna v. subclavia;
- V. jugularis interna, v. subclavia, n. phrenicus, a. cervicalis ascendens, a. suprascapularis?

20. What is the projection of n. phrenicus on the skin:

- + Gueneau de Mussy point, fossa supraclavicular minor, between crura of sternoclavicular mastoid muscle;
- In spatium antescalenum;
- In spatium interscalenum;
- In trigonum scalenovertbrale?

21. What runs medially from n. phrenicus on the anterior surface of m. scalenus anterior:

- + A. cervicalis ascendens;
- A. suprascapularis;
- A. cervicalis superficialis;
- A. thyreoidea inferior?

22. What runs in front of n. phrenicus:

- + A. suprascapularis, a. cervicalis superficialis;
- Ansa subclavia;
- A. cervicalis ascendens, a. suprascapularis;
- Ansa cervicalis?

23. What is scalene vertebral triangle limited externally by:

- + M. scalenus anterior;
- M. scalenus medius;
- M. scalenus posterior;
- M. sternocleidomastoideus?

24. What is scalene vertebral triangle limited medially by:

- + M. longus colli;
- M. sternocleidomastoideus;

- M. sternohyoideus;
- M. omohyoideus?

25. What is scalene vertebral triangle limited from below by:

- + Cervical pleura;
- Clavicle;
- Breast bone;
- M. scalenus anterior?

26. What is scalene vertebral triangle limited from the front by:

- + V. fascia of the neck;
- M. scalenus anterior;
- M. sternocleidomastoideus;
- M. sternohyoideus?

27. Identify the apex of scalene vertebral triangle:

- + Tuberculum caroticum;
- Cervical pleura;
- M. sternocleidomastoideus;
- M. omohyoideus.

28. Identify the composition of scalene vertebral triangle:

- + A. subclavia, medial, intermedial and inferior ganglia of sympathetic trunk, v. vertebralis, left sternal lymphatic duct;
- A. et v. subclavia medial, intermedial and inferior ganglia of sympathetic trunk, v. vertebralis, ductus thoracicus;
- A. subclavia, v. jugularis interna, a. carotis communis, n. vagus, medial, intermedial and inferior ganglia of truncus sympathicus;
- V. jugularis interna, v. subclavia, ductus thoracicus, n. vagus, n. phrenicus.

29. Identify the place of injection of the needle to perform conductive anesthesia of cervical plexus:

- + Middle posterior margin of m. sternocleidomastoideus;
- Middle anterior margin of m. trapezius at Gueneau de Mussy's point;
- Between crura of sternocleidomastoid muscle.

30. What runs medially from truncus thyrocervicalis crossing a. subclavia:

- + N. vagus;
- N. phrenicus;
- V. jugularis interna;
- Ductus thoracicus?

31. What runs laterally from truncus thyrocervicalis crossing a. subclavia:

- + N. phrenicus;
- N. vagus;
- V. jugularis interna;
- A. thyreoidea inferior?

32. What is identified at the base of truncus thyrocervicalis:

- + Ansa subclavia;
- Ansa cervicalis;
- Glomus caroticum;
- Ductus thoracicus?

33. Identify the branches of subclavian artery in scalene vertebral triangle:

- + A. vertebralis, truncus thyrocervicalis, a. thoracica interna;
 - A. vertebralis, a. cervicalis ascendens, a. cervicalis superficialis;
 - A. vertebralis, a. transversa colli, a. thoracica interna
- truncus thyrocervicalis, a. transversus colli;
- A. thyreoidea inferior.

34. What is located behind and medially to a. vertebralis:

- + Ganglion stellatum;
- V. vertebralis;
- Ganglion cervicale intermedium;
- N. laryngeus reccurens?

35. Identify the branches of truncus thyreocervicalis:

- + A. thyreoidea inferior, a. cervicalis ascendens, a. cervicalis superficialis, a. suprascapularis;
- A. thyreoidea superior, a. thoracica interna, a. vertebralis, a. cervicalis superficialis;
- A. vertebralis, a. thyreoidea inferior, a. cervicalis superficialis, a. suprascapularis;
- A. transversa colli, a. thyreoidea inferior, a. suprascapularis, a. thoracica interna.

36. What is the anterior wall of spatium interscalenum composed of:

- + M. scalenus anterior;
- M. scalenus medius;
- M. scalenus posterior;
- M. sternocleidomastoideus?

37. What is the posterior wall of spatium interscalenum composed of:

- + M. scalenus medius;
- M. scalenus posterior;
- M. scalenus anterior;
- M. sternocleidomastoideus?

38. What is the inferior wall of spatium interscalenum composed of:

- + I rib;
- M. scalenus anterior;
- Clavicle;
- M. sternocleidomastoideus?

39. What is identified in spatium interscalenum:

- + A. subclavia, plexus brachialis;
- V. subclavia, n. vagus;
- A. et v. subclavia, plexus brachialis;
- V. jugularis interna, n. vagus, a. carotis communis?

40. Identify the branches of a. subclavia in spatium interscalenum:

- + Truncus costocervicalis;
- Truncus thyreocervicalis;
- A. transversus colli;
- A. vertebralis, a. thoracica interna.

41. Identify the branches of truncus costocervicalis:

- + A. cervicalis profunda, a. intercostalis suprema;
- A. cervicalis superficialis, a. suprascapularis;
- A. cervicalis ascendens, a. cervicalis superficialis, a. transversa colli;
- A. cervicalis profunda, a. cervicalis superficialis.

42. Name the author of brachial plexus anesthesia:

- + Kulenkampff;
- Lukashevych;
- Oberst;
- Brown.

43. Identify the place of injection and direction of the needle at the block of brachial plexus:

- + The needle is inserted above the middle of the clavicle medially and downward directly to the II thoracic vertebra;
- The needle is inserted 1–1,5 cm below the middle of the clavicle laterally and downward;
- The needle is inserted above the middle of the clavicle laterally and downward;

– The needle is inserted 1–1,5 cm below the middle of the clavicle middlely and downward.

44. What nerve crosses external surface of internal jugular vein in the upper third of sternocleidomastoid region:

- + N. accessorius;
- N. hypoglossus;
- N. laryngeus superior;
- Ansa cervicalis?

45. What nerve crosses external surface of the internal jugular vein in the middle third of sternocleidomastoid region:

- + Radix inferior plexus cervicalis;
- Radix superior plexus cervicalis;
- N. hypoglossus;
- N. accessorius?

46. Where is the thoracic lymphatic duct at the level of apertura thoracis superior identified:

- + Left margin of the gullet behind a. subclavia;
- Behind the gullet in front of a. subclavia;
- In anterior of a. subclavia, a. carotis communis, v. jugularis interna;
- Right margin of the gullet behind a. subclavian?

47. What is identified in anterior of thoracic duct:

- + A. carotis communis, v. jugularis interna, n. vagus;
- A. et v. vertebralis;
- Cervical pleura, a. et v. subclavia;
- A. carotis interna, v. jugularis interna, cervical pleura?

48. Identify the place of injection to perform conductive anesthesia of cervical plexus:

- + Erb's point;
- Gueneau de Mussy's point;

- In the middle of posterior margin of sternocleidomastoid muscle;
- In the middle of anterior margin of sternocleidomastoid muscle.

49. Identify the place of injection to perform vagosympathetic block:

- + Angle created by the crossing of external jugular vein with the posterior margin of sternocleidomastoid muscle;
- In the middle of anterior margin of sternocleidomastoid muscle;
- Erb's point;
- Gueneau de Mussy's point.

50. What runs between the II and V fascia of the neck in tr. omotracheoideum:

- + A. et v. cervicalis superficialis, branch of cervical plexus, n. accessorius;
- A. et v. suprascapularis;
- A. et v. subclavia, plexus brachialis;
- A. et v. cervicalis ascendens, n. phrenicus?

51. What runs between the III and V fascia of the neck in tr. omoclaviculare:

- + A. et v. suprascapularis;
- A. et v. cervicalis ascendens;
- N. accessorius;
- N. phrenicus, a. cervicalis ascendens?

52. What is identified beneath the V fascia in tr. omoclaviculare:

- + A. et v. subclavia, pl. brachialis;
- A. et v. suprascapularis;
- A. et v. cervicalis superficialis;

– A. et v. suprascapularis, a. et v. cervicalis superficialis, n. accessories?

53. What is located medially from the first part of the right subclavian artery:

- + Trachea, a. carotis communis;
- V. jugularis interna
- Cervical pleura;
- N. vagus?

54. What is identified below the first part of subclavian artery:

- + Cervical pleura;
- I rib;
- Clavicle;
- V. subclavian?

55. What is identified in anterior of the first part of subclavian artery:

- + Pirogov's venous angle, n. vagus, n. phrenicus;
- A. carotis communis, n. vagus, v. jugularis interna;
- V. subclavia, n. vagus, truncus sympathicus;
- Cervical pleura?

56. What is identified behind the first part of right subclavian artery:

- + N. laryngeus reccurens;
- Pirogov's venous angle;
- N. vagus, n. phrenicus;
- Trachea?

57. What muscles cover thyroid gland:

- + M. sternohyoideus, m. sternothyreoideus, m. omohyoideus;
- M. sternohyoideus, m. sternothyreoideus, m. thyreohyoideus;

- M. sternohyoideus, m. sternothyreoideus; m. sternocleidomastoideus;
- M. sternohyoideus, m. sternothyreoideus, anterior venter of m. digastricus?

58. What cartilages of trachea does isthmus of the thyroid gland correlate with:

- + 2–4;
- 2–3;
- 3–4;
- 1–4?

59. What organs are involved into the thyroid gland:

- + Trachea, pharynx, larynx, gullet;
- Trachea, pharynx, larynx;
- Trachea, pharynx, gullet;
- Trachea, gullet?

60. What is located behind the thyroid gland:

- + Parathyroid glands, a. thyreoidea inferior, n. laryngeus recurrens;
- Parathyroid glands, a. carotis communis, n. vagus;
- Parathyroid glands, a. thyreoidea inferior, n. vagus;
- Parathyroid glands, a. thyreoidea inferior, thymus?

61. What is adjacent to the posterior medial surface of the thyroid gland:

- + N. laryngeus recurrens;
- A. carotis communis;
- N. vagus;
- V. jugularis interna?

62. What is adjacent to the posterior lateral surface of the thyroid gland:

- + A. carotis communis;

- Parathyroid glands;
- A. thyreoidea inferior;
- V. jugularis interna?

63. What danger faces the surgeon on the stage of ligation of the inferior thyroid artery:

- + Ligation of recurrent laryngeal nerve;
- Ligation of vagus nerve;
- Injury of common carotid artery;
- Removal of parathyroid glands?

64. What complications may occur at complete removal of the thyroid gland:

- + Asphyxia, hypoparathyroidism;
- Myxedema;
- Grave's disease;
- Claude Bernar–Horner syndrome?

65. Who is the author of arciform incision on the neck:

- + Kiuttner;
- De Quervain;
- Petrovskyi;
- Crile?

66. Name the author of angular incision on the neck:

- + De Quervain;
- Petrovskyi;
- Crile;
- Kiuttner.

67. Name the authors of T-like incision on the neck:

- + Petrovskyi, Crile;
- De Quervain, Kiuttner;
- Crile, de Quervain;
- Petrovskyi, Kiuttner.

68. How is Kiuttner's incision performed:

- + From the posterior margin of sternocleidomastoid muscle 2 cm below the mastoid process crossing sternocleidomastoid muscle and along the anterior margin to jugular incisure of the breastbone;
- At the level of sublingual bone conducting along the anterior margin of sternocleidomastoid muscle, behind the breastbone, and then along the clavicle to the anterior margin of trapezius muscle;
- At the level of superior margin of the thyroid cartilage conducting along the anterior margin of sternocleidomastoid muscle;
- Transverse incision 2 cm above the jugular incisure of the breastbone, layer-by-layer penetrating into the III and IV fascia of the neck which are moved apart?

69. How is de Quervain's incision performed:

- + At the level of sublingual bone, conducting along the anterior margin of sternocleidomastoid muscle, behind the breastbone and along the clavicle to the anterior margin of trapezius muscle;
- From the posterior margin of sternocleidomastoid muscle 2 cm below mastoid process crossing sternocleidomastoid muscle and along the anterior margin to jugular incisure of the breastbone;
- From the superior margin of the thyroid cartilage along the anterior margin of sternocleidomastoid muscle;
- Transverse incision 2 cm above the jugular incisure of the breastbone, layer-by-layer penetrating into the III and IV fascia of the neck which are moved apart?

70. How is Kocher incision performed:

- + 3 cm above the incisure of the breastbone in the transverse direction on the inferior skin fold of the neck between internal margins of sternocleidomastoid muscle;
- From the superior margin of the thyroid cartilage conducting along the anterior margin of sternocleidomastoid muscle;

- From the posterior margin of sternocleidomastoid muscle 2 cm below mastoid process crossing sternocleidomastoid muscle and along its anterior margin to jugular incisure of the breastbone;
- At the level of sublingual bone along the anterior margin of sternocleidomastoid muscle, behind the breastbone conducting along the clavicle to the anterior margin of trapezius muscle?

71. How is Diakonov's incision performed:

- + Below the margin of the mandible, then downward along the anterior margin of sternocleidomastoid muscle to jugular incisure of the breastbone and turning back along the clavicle to the anterior margin of trapezius muscle;
- 3 cm above incisure of the breastbone in the transverse direction on the inferior skin fold of the neck between internal margins of sternocleidomastoid muscle;
- At the level of sublingual bone, along the anterior margin of sternocleidomastoid muscle, turning back at the breastbone conducting along the clavicle to the anterior margin of trapezius muscle;
- At the level of superior margin of the thyroid cartilage and along the anterior margin of sternocleidomastoid muscle to jugular incisure of the breastbone?

72. Where are the superior parathyroid glands identified:

- + On the posterior surface of the thyroid gland between the capsule and visceral leaf of the IV fascia of the neck at the level of cricoid cartilage, in the middle between superior pole and isthmus;
- On the posterior surface of the thyroid gland between the capsule and visceral leaf of the IV fascia of the neck at the level of isthmus of thyroid gland;
- On the posterior surface of the thyroid gland between the capsule and visceral leaf of the IV fascia of the neck at the level of sublingual bone;
- On the posterior surface of the thyroid gland between parietal and visceral leaves of the IV fascia of the neck at the middle distance between the superior pole and isthmus?

73. Where are the inferior parathyroid glands identified:

- + At the inferior pole of the gland at the entrance to a. thyreoidea inferior;
- On the posterior surface of the thyroid gland at the level of isthmus;
- At the level of sublingual bone;
- At the inferior pole of the gland at the level cricoid cartilage?

74. What is the posterior entrance to the larynx limited by:

- + Apex of arytenoid cartilages;
- Epiglottis;
- Plicae aryepiglotticae;
- Membrana thyreohyoidea?

75. What is the lateral entrance to the pharynx limited by:

- + Plicae aryepiglotticae;
- Epiglottis;
- Cricoid cartilage;
- Apex of arytenoid cartilages?

76. Within what measures with regard to vertebral column is the larynx in adults identified:

- + IV–VI cervical vertebrae;
- III–VI cervical vertebrae;
- II–IV cervical vertebrae;
- IV–VII cervical vertebrae?

77. What is identified in front of the pharynx:

- + M. sternohyoideus, m. sternothyroideus, m. thyreohyoideus, pyramid part of the thyroid gland;
- M. sternohyoideus, m. sternothyroideus, m. omohyoideus, m. thyreohyoideus;
- M. sternohyoideus, m. sternothyroideus, m. sternocleidomastoideus;

– M. sternohyoideus, m. sternothyroideus, m. thyrohyoideus, m. omohyoideus, m. sternocleidomastoideus?

78. What is identified behind the larynx:

- + Pharynx, esophagus;
- Parts of the thyroid gland;
- A. carotis communis, n. vagus, v. jugularis interna;
- Pharynx, esophagus, a. thyroidea inferior?

79. What is identified laterally from the larynx:

- + Parts of the thyroid gland, a. carotis communis;
- A. carotis communis, m. sternohyoideus, m. sternothyroideus;
- Parts of the thyroid gland, m. sternohyoideus, m. sternothyroideus;
- A. carotis communis, n. vagus, v. jugularis interna?

80. Where does the cervical region of trachea begin:

- + At the level of the VI cervical vertebra;
- At the level of the IV cervical vertebra;
- At the level of the III cervical vertebra;
- At the level of the V cervical vertebra?

81. At what level bifurcation of trachea is related to vertebral column identified:

- + At the level of the V thoracic vertebra;
- At the level of the IV thoracic vertebra;
- At the level of the VI thoracic vertebra;
- At the level of the VII thoracic vertebra?

82. What is identified in front of trachea:

- + M. sternohyoideus, m. sternothyroideus, thyroid gland and its isthmus, pretracheal cellular tissue;
- M. sternohyoideus, m. sternothyroideus, m. thyroideus, thyroid gland its isthmus, pretracheal cellular tissue;

- M. sternohyoideus, m. sternothyroideus, m. omohyoideus, thyroid gland and its isthmus;
- M. sternohyoideus, m. sternothyroideus, m. sternocleidomastoideus, thyroid gland and its isthmus?

83. What is identified in pretracheal cellular tissue:

- + A. thyroidea ima, plexus venosus, thyroideus impar, vv. thyroidea inferiores, thymus, v. brachiocephalica sinistra, truncus brachiocephalicus;
- A. thyroidea ima, plexus venosus, thyroideus impar, vv. thyroidea inferiores, v. jugularis interna, v. brachiocephalica sinistra, truncus brachiocephalicus;
- A. thyroidea ima, vv. thyroideus inferiores, n. vagus, v. brachiocephalica sinistra, truncus brachiocephalicus;
- A. thyroidea ima, vv. thyroideus inferiores, v. jugularis interna, n. vagus, n. laryngeus recurrens?

84. What rings of trachea are dissected at superior tracheotomy:

- + II–III;
- I–II;
- III–IV;
- I–II–III?

85. What is the procedure of performing superior tracheotomy:

- + The II and III rings of trachea are dissected; the trachea is punctured by a scalpel approximately 1 cm in depth cutting surface is directed cranially;
- The II and III rings of trachea are dissected, cutting surface is directed caudally;
- The I and II rings of trachea are dissected with a scalpel about 1 cm in depth, cutting surface is directed parallel;
- The II and IV rings of trachea are dissected with a scalpel about 1 cm in depth, cutting surface is directed cranially?

86. Identify cellular spaces on the way to trachea at inferior tracheotomy:

- + Spatium interaponeuroticum suprasternale, spatium pretracheale;
- Spatium interaponeuroticum suprasternale, spatium pretracheale, spatium retroviscerale;
- Saccus caecus retrosternocleidomastoideus, spatium pretracheale;
- Spatium interaponeuroticum suprasternale, spatium pretracheale, spatium prevertebrale.

87. What complications can occur at tracheotomy:

- + Subcutaneous emphysema, necrosis of cartilages, aspiration pneumonia, bleeding, asphyxia, injury of esophagus;
- Bleeding, dysphagia, necrosis of cartilages, aspiration pneumonia, asphyxia, injury of esophagus, torticollis;
- Hemimimima, bleeding, dysphagia, asphyxia, injury of esophagus, necrosis of cartilages;
- Subcutaneous emphysema, dysphagia, bleeding, necrosis of cartilages, hemiglossoplegia, pneumonia?

88. What is identified in front of the cervical part of esophagus:

- + Cricoid cartilage, trachea, left recurrent nerve;
- Parts of the thyroid gland, trachea, left recurrent nerve;
- Trachea, v. brachicephalica sinistra, common carotid arteries;
- Trachea, right recurrent nerve, parts of the thyroid gland?

89. What is identified laterally to the cervical part of esophagus:

- + Right recurrent nerve, lateral parts of the thyroid gland, a. thyroidea inferior, a. carotis communis, ductus thoracicus;
- Left recurrent nerve, lateral parts of the thyroid gland, a. carotis communis, v. jugularis interna, n. vagus;

- Lateral parts of the thyroid gland, a. carotis communis, n. vagus, a. thyroidea inferior, v. jugularis interna;
- Lateral parts of the thyroid gland, a. carotis communis, trachea, mediastinal pleura, right recurrent nerve?

90. At what level with regard to vertebral column is the cervical part of esophagus identified:

- + From the VI cervical to the II thoracic vertebra;
- From the IV cervical to the I thoracic vertebra;
- From the V cervical to the I thoracic vertebra;
- From the VII cervical to the III thoracic vertebra?

91. What is identified behind the cervical part of esophagus:

- + Vertebral column, m. longus colli, spatium retroviscerale, fascia prevertebralis;
- Vertebral column, m. longus capitis, spatium retroviscerale, fascia prevertebralis;
- Vertebral column, pharynx, m. longus colli, fascia prevertebralis, spatium retroviscerale;
- Vertebral column, m. longus colli, fascia prevertebrale, n. laryngeus recurrens?

92. How is the wall of esophagus sutured:

- + First layer of interrupted sutures is put on all layers of the wall, second layer on adventitia and muscle coat;
- By single-layer interrupted suture;
- By two-layer transverse suture;
- First layer of interrupted sutures is put on the mucous membrane, second layer on adventitia and muscle coat?

93. What incision is performed to expose cervical part of esophagus:

- + Along the anterior margin of sternocleidomastoid muscle, to the left from the jugular incisure of the breastbone to the superior margin of the thyroid cartilage;

- Transverse incision above the jugular incisure of the breastbone between the internal margins of sternocleidomastoid muscles;

- Incision 5-6 cm in length is performed in the inferior region of the lateral surface of the neck;

- Incision 5-6 cm in length is performed from the apex of the thyroid cartilage and then downwards?

94. What incision is performed to expose common carotid artery:

- + Along the anterior margin of sternocleidomastoid muscle from the superior margin of the thyroid cartilage 5-6 cm in length;

- Along the anterior margin of sternocleidomastoid muscle from the angle of mandible 5-6 cm in length;

- Petrovskyi incision;

- Kiuttner's incision?

95. What layers are dissected to expose common carotid artery:

- + Skin, subcutaneous cellular tissue, the I fascia of the neck, m. platysma, the II fascia of the neck, parietal plate of the IV fascia of the neck;

- Skin, subcutaneous cellular tissue, the I fascia of the neck, m. platysma, the II fascia of the neck, the III fascia of the neck, m. omohyoideus, parietal plate of the IV the fascia of the neck;

- Skin, subcutaneous cellular tissue, the I fascia of the neck, m. platysma, the II fascia of the neck, m. sternocleidomastoideus, the III fascia of the neck, m. omohyoideus, parietal plate of the IV fascia of the neck;

- Skin, subcutaneous cellular tissue, the I fascia of the neck, m. platysma, the II fascia of the neck, m. sternocleidomastoideus, the III fascia of the neck, m. omohyoideus, parietal and visceral plates of the IV fascia of the neck?

96. What anatomical formations should be taken into account at exposing esophagus:

- + A. thyreoidea inferior sinistra, n. laryngeus reccurens;
- A. carotis communis, v. jugularis interna, n. vagus;
- A. carotis externa, v. jugularis interna, n. laryngeus reccurens;
- A. thoracica interna, n. laryngeus reccurens?

97. What arteries at the base of the brain are important in general blood circulation at ligation of common carotid artery:

- + A. communicans anterior, a. communicans posterior;
- A. cerebri anterior, a. communicans anterior, a. cerebri posterior, a. communicans posterior;
- A. cerebri media, a. communicans anterior, a. cerebri posterior, a. communicans posterior;
- A. cerebri anterior, a. cerebri media, a. cerebri posterior?

98. What anastomoses of retrocranial arteries with intracranial ones are important in general blood circulation at ligation of common carotid artery:

- + A. dorsalis nasi with a. angularis, a. supraorbitalis with a. temporalis superficialis, a. vertebralis with a. cervicalis profunda, a. vertebralis with a. occipitalis;
- A. dorsalis nasi with a. supraorbitalis, a. supraorbitalis with a. temporalis superficialis, a. vertebralis with a. occipitalis;
- A. supraorbitalis with a. supratrochlearis, a. temporalis superficialis with a. occipitalis, a. dorsalis nasi with a. angularis;
- A. vertebralis with a. temporalis superficialis, a. dorsalis nasi with a. angularis, a. supraorbitalis with a. supratrochlearis?

99. What anastomoses of retrocranial arteries are important in general blood circulation at ligation of common carotid artery:

- + A. thyreoidea superior with the artery of the same name on the opposite side, a. thyreoidea superior with a. thyreoidea inferior, a. occipitalis with a. cervicalis profunda;
- A. thyreoidea superior with a. cervicalis profunda, a. facialis with a. temporalis superficialis, a. occipitalis with a. temporalis superficialis;

– A. thyreoidea superior with a. thyreoidea inferior, a. facialis with a. temporalis superficialis, a. occipitalis with a. cervicalis profunda;

– A. temporalis superficialis with the artery of the same name on the opposite side a. thyreoidea superior with a. thyreoidea inferior, a. facialis with a. occipitalis?

100. Identify skeletotopy of the pharynx:

+ From the base of the skull to the VI cervical vertebra;

– From pars nasalis to pars laryngea;

– From the IV cervical to the VII cervical vertebrae;

– From the hard palate to the entrance of the larynx?

101. What is identified in front of the larynx:

+ Nasal cavity, oral cavity, pharynx;

– Esophagus, thyroid gland;

– Pharynx, thyroid gland;

– Pharynx, thyroid gland, m. longus capitis?

102. What is identified behind the pharynx:

+ Bodies of cervical vertebrae, m. longus colli, fascia prevertebralis, retropharyngeal space;

– Bodies of cervical vertebrae, pharynx, esophagus, m. longus colli, retropharyngeal space;

– Bodies of cervical vertebrae, m. longus colli, ductus thoracicus, fascia prevertebralis;

– Bodies of cervical vertebrae, m. longus colli, fascia prevertebralis, esophagus?

103. What is identified laterally from the pharynx:

+ Common carotid arteries, parts of the thyroid gland, a. pharyngea ascendens, v. jugularis interna, a. carotis interna, the IX-XII pairs of intracranial nerves, truncus sympathicus;

– A. carotis interna, v. jugularis interna, the IX-XII pairs of intracranial nerves;

- A. carotis communis, n. vagus, v. jugularis interna, parts of the thyroid gland;
- A. carotis communis, n. vagus, v. jugularis interna, parts of the thyroid gland, n. laryngeus recurrens, a. pharyngea ascendens?

104. Identify the passage of inferior thyroid artery:

- + Behind a. carotis communis in front of a. vertebralis;
- Upward to m. scalenus anterior;
- Along the clavicle to incisura scapulae;
- In transverse direction to scalene muscles?

105. Identify the topography of superior laryngeal nerve:

- + Comes from the medial side of a. carotis interna;
- Passes in front of a. carotis interna;
- Between trachea and esophagus;
- Passes along the anterior surface of trachea?

106. Identify the passage and region of innervation of r. internus n. laryngeus superior:

- + Together with a. laryngea superior it penetrates through membrana thyreohyoidea, innervates mucous membrane of the pharynx above plica vocalis, root of the tongue and epiglottis;
- Passes medially to a. carotis interna, innervates larynx;
- Passes between trachea and esophagus, innervates pharynx above plica vocalis;
- Together with a. laryngea superior it penetrates through membrana thyreohyoidea, innervates the mucous membrane of the pharynx below vocal fissure.

107. What incision is performed to expose thyroid gland at strumectomy:

- + Kocher's incision;
- De Quervain's incision;
- Petrovskyi incision;
- Dyakonov's incision?

108. What is used for dissection of the second and third fascia of the neck at strumectomy:

- + Medianline of the neck;
- Transverse incision above the jugular incisure of the breastbone;
- Anterior margin of sternocleidomastoid muscle;
- Petrovskiy incision?

109. Name the author of the subtotal subfascial resection of the thyroid gland:

- + Nikolaiev;
- Kocher;
- Martynov;
- Rusanov?

110. What is the way of surgical intervention at nodular goiter:

- + Partial resection of the thyroid gland;
- Subtotal subfascial resection of the gland;
- Enucleation of the ganglion;
- Total extirpation of the thyroid gland?

111. What symptoms can follow the removal of parathyroid glands:

- + Chvostek, Trousseau;
- Moebius;
- Schteltvag;
- Gorner?

112. What should be necessary conducted in extreme situation at deep asphyxia:

- + Conicocentrez;
- Craniotomy;
- Upper tracheotomy;

– Tracheotomy of Bjork?

113. What incision is performed at coniotomy:

- + Transverse incision in the interspaces between cricoid and thyroid cartilages;
- Vertical incision on Kocher median line;
- Transverse incision above the jugular incisure of the breastbone?

114. What special instruments are used at tracheotomy:

- + Luer's cannula, one-tooth sharp Kocher retractors, Trousseau dilator;
- Luer's cannula, raspator, laminar Langenbeck retractor;
- Luer's cannula, laminar Farabeuf retractor, Trousseau dilator;
- Luer's cannula, haemospinal forceps, one-tooth sharp retractors, Trousseau dilator?

115. Describe tracheotomy according to Bjork technique:

- + On the anterior wall of trachea the tongue-like flap with the turned up apex is cut out, ends of the flap are fixed to skin;
- Incision is made on the medial line from cricoid cartilage to incisure of the breastbone cutting the II and III rings of trachea that are fixed to skin;
- Transverse incision is made between cricoid and thyroid cartilages, borders of the wound of trachea should be fixed to skin;
- Trachea is dissected between the II and III rings, borders of the wound of trachea should be fixed to skin?

116. What is identified externally from fascia pharyngobasilaris:

- + Muscle coat;
- Mucous membrane;
- Parapharyngeal cellular tissue;
- Retropharyngeal space?

117. What is located externally from muscle coat of the pharynx:

- + Fascia buccopharyngea;
- Fascia pharyngobasilaris;
- Mucous membrane;
- Parapharyngeal cellular tissue?

118. What is located externally from fascia buccopharyngea:

- + Parapharyngeal cellular tissue;
- Muscle coat;
- Mucous membrane;
- Fascia pharyngobasilaris?

119. Blood supply of pharynx is carried out by:

- + A. pharyngea ascendens, a. palatina ascendens, a. palatina descendens, a. canalis pterygoideus, a. thyreoidea superior, a. thyreoidea inferior;
- A. pharyngea ascendens, a. palatina ascendens, a. palatina descendens, a. thyreoidea superior et inferior, a. cervicalis ascendens;
- A. pharyngea ascendens, a. palatina descendens, a. thyreoidea superior et inferior, a. cervicalis profunda;
- A. pharyngea ascendens, a. palatina ascendens, a. palatina descendens, a. thyreoidea superior et inferior.

120. What is pharynx innervated by:

- + N. glossopharyngeus, n. vagus, truncus sympathicus;
- N. glossopharyngeus, n. vagus, n. hypoglossus, truncus sympathicus;
- N. glossopharyngeus, n. accessorius, n. vagus, truncus sympathicus;
- N. glossopharyngeus, n. vagus, n. phrenicus, truncus sympathicus?

121. What incision is performed to expose the abscess of retropharyngeal space:

- + The vertical incision of the posterior wall of the pharynx 1 cm in depth, 2 cm in length through the oral cavity;
- Arciform incision in the region of angle of the mandible;
- Incision is performed on the anterior margin of sternocleidomastoid muscle;
- Kocher's incision?

122. Blood supply of the cervical part of esophagus is carried out by:

- + A. thyreoidea inferior;
- A. thyreoidea superior;
- A. pharyngea ascendens;
- A. cervicalis profunda.

123. What should be necessary conducted before finishing the suture of arthrotomic aperture at carotid thrombus endarterectomy:

- + To clean thrombs, remove air;
- To remove plague from the air gap of artery;
- Exfoliate and remove plague from the air gap of artery;
- Balloon angioplasty?

124. What is the first stage of thrombus endarterectomy operation:

- + Exfoliation of plague from arteries;
- Cleaning up thrombs;
- Removing air;
- Exfoliation of plagues and remove thrombs?

125. How are the thrombs removed at thrombus endarterectomy operation:

- + Through staged making of blood empty;
- Giving heparin;
- Through balloon angioplasty;

– Through plexectomy?

Test questions and answers for practical lesson № 6

1. What vessels and nerves are identified in subcutaneous cellular tissue of subclavian region:

+ nn. supraclaviculares, rr. cutanei anteriores, rr. cutanei laterales, v. thoracoepigastrica, v. cephalica;

– a. thoracica lateralis, n. thoracicus longus, n. musculocutaneus, a. et v. thoracodorsalis, nn. intercostobrachiales;

– nn. pectorales medialis, nn. pectorales lateralis, a. thoracica lateralis, a. thoracica suprema, n. thoracicus longus;

– nn. supraclaviculares, rr. cutanei anteriores, v. basilica?

2. How is acute thrombophlebitis of subcutaneous veins of the anterior chest wall called:

+ Mondor's disease;

– Paget – Schroetter's syndrome;

– Wright syndrome;

– Grave's disease?

3. Where is superficial subpectoral space identified:

+ between the deep leaf of fascia pectoralis and fascia clavipectoralis;

– between the superficial leaf of fascia pectoralis and fascia clavipectoralis;

– between the leaves of superficial fascia;

– between the posterior surface of m. pectoralis minor and thoracic wall?

4. What anatomical formations delimit superficial and deep subpectoral space of breast:

+ minor thoracic muscle and deep leaf of proper fascia of breast (clavicular costal fascia);

– minor thoracic muscle and superficial leaf of proper fascia;

– major thoracic muscle and superficial leaf of proper fascia;

– major thoracic muscle and superficial fascia?

5. Where is the deep subpectoral space identified:
+ between the posterior surface of m. pectoralis minor and chest walls;
– between the deep leaf of fascia pectoralis and fascia clavipectoralis;
– between the leaves of proper fascia;
– between the deep leaf of fascia pectoralis and fascia clavipectoralis?

6. What vessels and nerves are identified in the cellular tissue of superficial subpectoral space:
+ branches of a. thoracoacromialis, nn. pectorales medialis, nn. pectorales lateralis;
– a. thoracica lateralis, a. thoracica suprema, n. thoracicus longus;
– a. circumflexa humeri anterior, v. cephalica;
– branches of a. thoracica lateralis, a. thorocodorsalis?

7. What incision can expose subpectoral abscess:
+ along the inferior margin of major thoracic muscle;
– along the superior margin of minor thoracic muscle;
– along the margin of the broadest muscle of back;
– along the superior margin of major thoracic muscle?

8. What is the passage of v. axillaris in relation to the elements of neurovascular fascicle in trigonum clavipectorale:
+ v. axillaris – inferiorly, medially and anteriorly from a. axillaris;
– v. axillaris – inferiorly, laterally and anteriorly from a. axillaris;
– v. axillaris – superiorly and posteriorly from a. axillaris;
– v. axillaris – medially and anteriorly from plexus brachialis?

9. What is the passage of plexus brachialis in relation to the elements of neurovascular fascicle in trigonum clavipectorale?

+ plexus brachialis – superiorly and posteriorly from a. axillaris;

– plexus brachialis – inferiorly, medially and anteriorly from a. axillaris;

– plexus brachialis – superiorly and posteriorly from a. axillaris;

– plexus brachialis – medially and anteriorly from v. axillaris?

10. Identify the branches of a. axillaris in trigonum clavipectorale:

+ a. thoracica suprema, a. thoracoacromialis;

– a. thoracica lateralis;

– a. thoracica interna, a. transversa colli;

– a. circumflexa humeri anterior et posterior?

11. Identify the branches of a. axillaris in trigonum pectorale:

+ a. thoracica lateralis;

– a. thoracica suprema, a. thoracoacromialis;

– a. circumflexa humeri anterior et posterior;

– a. thoracica interna, a. transversa colli?

12. What is the frequency of usage of subclavian vein catheterization:

+ all of the following;

– constant placement, strict topographic-anatomic orienteer;

– has a significant lumen, does not stick;

– has high rate of blood circulation?

13. What is the reason of the puncture of right subclavian vein below the clavicle:

+ all of the following:

- large veins and thoracic lymphatic duct enter the upper wall of v. subclavia;
- above the clavicle located near the cupola of the pleura;
- below the clavicle the cupola of the pleura is separated from the vein by the 1st rib?

14. Determine the most appropriate point for v. subclavia puncture:

- + Abaniak's point;
- Yoffe's point;
- Erb's point;
- Gueneau de Mussy's point?

15. Where is Abaniak's point identified:

- + 1 cm below the boundary of medial and internal third of the clavicle;
- 1 cm above the boundary of medial and internal third of the clavicle;
- 1 cm below the middle of the clavicle;
- a little bit higher than the apex of the angle formed by lateral crus of sternocleidomastoid muscle and superior margin of the clavicle?

16. Where is Yoffe's point identified:

- + a little bit higher than the apex of the angle formed by lateral crus of sternocleidomastoid muscle and superior margin of the clavicle;
- between the crura of sternocleidomastoid muscle;
- 1 cm below the border of medial and internal third of the clavicle;
- 1 cm below the middle of the clavicle?

17. What is the adequate technique of subclavian vein puncture by Abaniak's method:

+ the needle is injected at a 45-degree angle to clavicle, at a 30-degree angle to the surface of the thorax, the cut is turned forwards and downwards, the needle is directed backwards and upwards, to the middle of superior margin of costal clavicular conjunction;

– the needle is injected focusing on the edge of the patient's nose, at a 45-degree angle to clavicle, to the surface of the chest, the cut is turned forwards and downwards;

– a little bit higher than the apex of the angle formed by the lateral crus of sternocleidomastoid muscle and superior margin of clavicle, to the middle of superior margin of sternoclavicular conjunction;

– all the above mentioned?

18. Characterize the technique of subclavian vein catheterization by Seldinger method:

+ with the needle the conductor is introduced to the vein, the needle is removed, through the conductor the catheter is introduced;

– with the needle the catheter is introduced to the vein, through the catheter the conductor is introduced;

– the needle is injected at a 45-degree angle to the surface of the chest, with the needle the catheter is introduced to the vein;

– all the above mentioned?

19. What symptoms develop at subclavian vein compression in costoclavicular interspace:

+ Paget – Schroetter syndrome;

– Mondor's disease;

– Grave's disease;

– Takayasu syndrome?

20. What is Paget – Schroetter syndrome characterized by:

+ progressive swelling resulting in disturbances of blood circulation in limbs, severe pain and cyanosis of the limb;

- dizziness, sonitus, reduction of visual acuity, headaches, paraesthesia;
- neurotrophic disturbances in minor thoracic muscle;
- all the above mentioned?

21. What are the methods of surgical treatment of Paget – Schroetter syndrome:

- + all of the following;
- thrombectomy with the help of Fogarty catheter;
- decompression of vein by excision of subclavian muscle and 1st rib;
- the shunt between the subclavian vein and internal jugular vein, or direct anastomosis between the external jugular vein and subclavian vein?

22. What vessels participate in the collateral blood circulation forming “scapular arterial circle” when subclavian artery is ligated:

- + r. profundus a. transversa colli → a. suprascapularis → a. circumflexa scapulae;
- a. circumflexa humeri → a. thoracica lateralis → a. thoracica interna;
- a. thoracica suprema → a. axillaris → a. suprascapularis;
- a. cervicalis superficialis → a. suprascapularis → a. circumflexa scapulae?

23. What are the sources of blood supply of mammary gland:

- + a. thoracica interna, a. thoracica lateralis, aa. intercostales;
- a. thoracoacromialis, a. thoracica suprema, a. epigastrica superior;
- a. suprascapularis, a. circumflexa scapulae, a. axillaris;
- a. circumflexa humeri anterior et posterior?

24. What lymphatic nodes are more likely to metastasize in case of breast cancer:

- + nodi lymphatici pectorales (Zorgius nodes), nodi lymphatici axillares;
- nodi lymphatici parasternales, nodi lymphatici intercostales;
- deep cervical lymphatic nodes?

25. What is the major surgical method to treat benign tumors of mammary gland:

- + sectoral resection;
- Patey's mastectomy;
- Halsted – Meyer mastectomy;
- Urban – Holdin mastectomy?

26. What incision is used to expose intramammary abscesses:

- + Angerer's incision;
- Bardenheuer – Morestin incision;
- Gosse incision;
- Orr incision?

27. What incision is used to expose retromammary abscesses:

- + Bardenheuer – Morestin;
- Angerer's incision;
- Gosse;
- Orr?

28. Who is the author of the most frequently used and typical incision in radical mastectomy:

- + Gosse;
- Angerer;
- Orr;
- Bardenheuer – Morestin?

29. Name the author of arciform incision to approach the subclavian artery:

- + Dzhanlidze;
- Petrovsky;

- Bardenheuer;
- Langenbeck?

30. Name the author of T-like incision to approach the subclavian artery:

- + Petrovsky;
- Dzhanelidze;
- Kocher;
- Langenbeck?

31. What vessels and nerves run in deep subpectoral space:

- + a. et v. thoracica lateralis, n. thoracicus longus;
- v. cephalica, a. et v. axillaris;
- plexus brachialis;
- a. thoracica interna, aa. intercostales?

32. Who is the author of radical mastectomy when major and minor thoracic muscles are removed:

- + Halsted and Meyer;
- Urban and Holdin;
- Patey;
- Holdin?

33. Name the author of radical mastectomy when only minor thoracic muscle is removed:

- + Patey;
- Halsted;
- Meyer;
- Urban?

34. Name the authors of supraradical mastectomy:

- + Urban and Holdin;
- Patey;
- Halsted and Meyer;
- Petrovsky – Dzhanelidze?

35. Where is the ligature in subclavian artery ligation performed:

- + distally from truncus thyreocervicalis;
- proximally from truncus thyreocervicalis;
- distally from truncus costocervicalis;
- proximally from truncus costocervicalis?

36. What is Fogarty catheter during operations on vessels used for:

- + for thrombectomy;
- for prolonged intravenous infusion of medication;
- for intravenous urography;
- for the puncture of subclavian vein?

37. Where is cellular tissue that can be damaged in retromammary mastitis located:

- + behind the capsule of mammary gland;
- subcutaneously;
- between the leaves of suspensory ligament of mammary gland;
- beneath the minor thoracic muscle?

38. Identify the localization of Zorngiuss lymph node which is first damaged by metastasis in breast cancer:

- + beneath the external margin of major thoracic muscle at the level of the 3rd rib;
- above the clavicle behind the external margin;
- along the passage of the internal thoracic artery;
- in the center of fovea inguinalis?

39. What fascia forms a capsule of mammary gland:

- + superficial fascia of the breast;
- superficial leaf of proper fascia of the breast;
- claviculocostal fascia;
- visceral fascia?

40. What is supporting ligament of mammary gland attached to:

- + clavicle;
- coracoid process of scapula;
- big tubercle of humeral bone head;
- acromion process of scapula?

41. Within what triangle are superficial and deep subpectoral spaces joined:

- + clavicular costal triangle;
- thoracic triangle;
- subcostal triangle;
- the spaces are not joined?

42. In what layer is retromammary cellular space identified:
+ between the superficial fascia and superficial leaf of proper fascia of breast;

- between the major thoracic muscle and clavicular costal fascia;
- under the minor thoracic muscle;
- under the clavicular costal fascia?

43. What incision in suppurative subareolar mastitis is more reasonable from the anatomic point of view:

- + by the outer peripapillary circle;
- radial behind the peripapillary circle;
- by the transitional plicae of mammary gland;
- radial with the cut on peripapillary circle?

44. What incision in suppurative retromammary mastitis is more reasonable from the anatomic point of view:

- + by the transitional plicae, under the mammary gland;
- by the outer peripapillary circle;
- radial behind the peripapillary circle;
- radial with the cut on peripapillary circle?

45. What incision in suppurative intramammary (interstitial or parenchymatous) mastitis is more reasonable from the anatomic point of view:

- + radial behind the peripapillary circle;
- by the outer peripapillary circle;
- transverse incision above the inflamed organ;
- radial with the incision of peripapillary circle?

46. Identify the direction of incision to expose intramammary (parenchymatous and interstitial) mastitis:

- + radial direction;
- semicircular direction;
- oblique direction;
- vertical direction?

47. How long do external intercostal muscles extend:

- + from the head of the rib to the cartilaginous part of the rib;
- from the costal angle to the costal margin;
- from the head of the rib to the costal angle;
- from the costal margin to costal angles?

48. How long do internal intercostal muscles extend:

- + from the costal margin to costal angles;
- from the head of the rib to the cartilaginous part of the rib;
- from the vertebral column to the cartilaginous part of the rib;
- from the head of the rib to the costal margin?

49. How are the elements of neurovascular fascicle located from above to below:

- + vein, artery, nerve;
- artery, vein, nerve;
- artery, nerve, vein;
- nerve, vein, artery?

50. What arteries supply intercostal interspaces with blood:

- + aa. intercostales anteriores, aa. intercostales posteriores, a. intercostalis suprema, a. thoracica suprema, a. musculophrenica;
- a. epigastrica superior, a. phrenica inferior, a. lumbales, truncus celiacus, a. suprascapularis;
- aa. intercostales anteriores, aa. intercostales posteriores, a. intercostalis suprema, a. epigastrica superior, a. phrenica inferior;
- no right answer?

51. What is the passage of the right intercostal arteries:

- + behind the esophagus, thoracic duct, v. azygos and truncus sympathicus;
- in front of truncus sympathicus, esophagus, thoracic duct, v. hemiazygos;
- laterally from truncus sympathicus, esophagus, thoracic duct;
- medially from thoracic duct, v. hemiazygos?

52. Where do left intercostal arteries pass:

- + behind v. hemiazygos and truncus sympathicus;
- behind esophagus and thoracic duct;
- in front of truncus sympathicus and esophagus;
- in front of thoracic duct and v. hemiazygos?

53. What is identified behind aa. intercostales posteriores on the way from the head to the angle of the rib:

- + mm. intercostales externi;
- mm. intercostales interni;
- fascia endothoracica, subpleural cellular tissue, parietal pleura;
- mm. transversus thoracis?

54. What is identified in front of aa. intercostales posteriores on the way from the head to the angle of the rib:

+ fascia endothoracica, subpleural cellular tissue, parietal pleura;

- mm. intercostales externi;
- mm. intercostales interni;
- mm. transversus thoracis?

55. Where do posterior intercostal arteries run on the way from scapular to the medial inguinal line:

- + in the costal sulcus, between intercostal muscles;
- below the proper rib;
- above the proper rib;
- in front of the proper rib?

56. Where do posterior intercostal arteries run on the way between the head and the angle of the rib:

- + below the rib located on the internal surface of mm. intercostales externi covered by fascia endothoracica, subpleural cellular tissue, parietal pleura;
- in costal groove, between intercostal muscles;
- above the rib;
- in front of the rib?

57. Where does a. thoracica interna run and what does it branch off:

- + lower semicircle of a. subclavia in trigonum scalenovertbrale;
- a. subclavia in spatium antescalenum;
- a. carotis communis in trigonum caroticum;
- pars descendens aortae in the chest?

58. What branches is internal thoracic artery divided into:

- + a. epigastrica superior and a. musculophrenica;
- a. epigastrica inferior and a. pericardiacophrenica;
- aa. intercostales posteriores and aa. mediastinales;
- aa. phrenicae superiores and rr. sternalis?

59. Where does blood from the anterior intercostal veins flow:

- + into v. thoracica interna;
- into v. azygos;
- into v. hemiazygos;
- into v. hemiazygos accessoria?

60. Where does blood from the posterior right intercostal veins flow:

- + into v. azygos;
- into v. thoracica interna;
- into v. hemiazygos and v. hemiazygos accessoria;
- v. portae?

61. Where does blood from the posterior left intercostal veins flow:

- + into v. hemiazygos and v. hemiazygos accessoria;
- into v. azygos;
- into v. thoracica interna;
- v. portae?

62. What is intercostal nerve on the way from the intervertebral opening to the costal angle covered by:

- + intrathoracic fascia, subpleural cellular tissue, parietal pleura;
- between mm. intercostales externi and mm. intercostales interni;
- it covers fascia endothoracica, runs behind the costal cartilages;
- behind mm. intercostales interni?

63. Where is it necessary to make a puncture of the thorax:

- + in the 7th–8th costal interspace, between scapular and medial axillary lines, along the superior margin of the rib;
- in the 5th–7th costal interspace, along the inferior margin

of the rib, between scapular and vertebral lines;

- in the 4th–5th costal interspace, between scapular and medial axillary lines, along the superior margin of the rib;
- between mm. intercostales externi and mm. intercostales interni?

64. Where is the superior boundary of the right cupula of diaphragm identified:

- + the 4th rib;
- the 5th rib;
- the 3rd rib;
- the 6th rib?

65. Where is the superior boundary of the left cupula of diaphragm identified:

- + the 5th rib;
- the 4th rib;
- the 3rd rib;
- the 6th rib?

66. What runs through hiatus aorticus of the diaphragm:

- + aorta, ductus thoracicus;
- esophagus, recurrent nerves;
- major and minor abdominal nerves;
- azygos and hemiazygos veins?

67. What runs through the esophageal opening of the diaphragm:

- + esophagus, vagus nerves;
- recurrent nerves and sympathetic trunk;
- major and minor abdominal nerves;
- azygos and hemiazygos veins?

68. What runs between muscle fascicles crus dexter et sinister of the right and left crura of the diaphragm:

- + truncus sympathicus, abdominal nerves, azygos and hemiazygos veins;
- recurrent nerves, vagus nerves, aorta, ductus thoracicus;
- vena cava inferior;
- esophagus, vena azygos and hemiazygos?

69. What runs through foramen of vena cava of the diaphragm:

- + inferior vena cava, branch of right phrenic nerve;
- superior vena cava, branch of right phrenic nerve;
- sympathetic trunk, recurrent nerves;
- major and minor abdominal nerves?

70. What is located between the sternal and costal part of the diaphragm to the left from xiphoid process:

- + Larrey's fissure;
- Bochdalek foramen;
- Morgagni fissure;
- trigonum lumbocostale?

71. What is identified between the sternal and costal part of the diaphragm to the right from xiphoid process:

- + Morgagni fissure;
- Larrey's fissure;
- Bochdalek foramen;
- trigonum lumbocostale?

72. What passes through trigonum sternocostale:

- + vasa thoracica interna;
- a. et v. musculophrenica;
- a. et v. pericardiophrenica;
- v. azygos and v. hemiazygos?

73. What is identified behind esophageal opening of the diaphragm:

- + aorta;
- pericardium;
- v. cava inferior;
- esophagus?

74. What is identified in front of esophageal opening of the diaphragm:

- + pericardium and heart;
- aorta;
- v. cava inferior;
- stomach?

75. What is identified in front of and to the right from esophageal opening of the diaphragm:

- + v. cava inferior;
- pericardium;
- heart;
- aorta?

76. What transmits pus from the cellular tissue of mediastinum to retroperitoneal cellular tissue:

- + hiatus esophageus, Bochdalek foramen, hiatus aorticus;
- Larrey's fissure, Morgagni fissure, v. cava inferior;
- esophagus;
- cupula of diaphragm?

77. What is attached to retroperitoneal part of the diaphragm:

- + pancreas, duodenum, kidneys and adrenal glands;
- stomach, heart, liver, gallbladder, spleen, lungs;
- v. azygos, liver, gallbladder, spleen, v. hemiazygos;
- spleen, bottom of the stomach, left lobe of the liver?

78. What is attached to the right cupula of diaphragm from below:

- + liver;

- stomach;
- spleen;
- pancreas, duodenum, kidneys and adrenal glands?

79. What is attached to the left cupula of diaphragm from below:

- + spleen, bottom of the stomach, left lobe of the liver;
- gallbladder;
- pancreas, duodenum, left kidney and adrenal gland;
- right kidney?

80. What is attached to the diaphragm from above:

- + pericardium, base of the lungs;
- stomach;
- gallbladder, spleen;
- kidneys and adrenal glands, liver?

81. What arteries penetrate the diaphragm superiorly and anteriorly:

- + a. musculophrenica, a. pericardiacophrenica;
- a. phrenica superior;
- a. phrenica inferior;
- a. vertebralis?

82. What arteries penetrate the diaphragm superiorly and posteriorly:

- + a. phrenica superior;
- a. musculophrenica, a. pericardiacophrenica;
- a. phrenica inferior;
- a. vertebralis?

83. What is the main vessel that nourishes the diaphragm:

- + a. phrenica inferior;
- a. phrenica superior;
- a. musculophrenica, a. pericardiacophrenica;

– a. vertebralis?

84. Where does the venous blood from superior surface of the diaphragm flow:

- + into v. azygos et v. hemiazygos;
- into v. cava inferior;
- into v. portae;
- into v. cava superior?

85. Where does venous blood from inferior surface of the diaphragm flow:

- + into v. cava inferior;
- into v. azygos et v. hemiazygos;
- into v. portae;
- into vv. vertebralis?

86. What operation is most effective in paraesophageal hernia with reflux-esophagitis:

- + Nissen fundoplication;
- Heller's cardiomyotomy;
- Kocher's mobilization;
- cardiomyolysis by Reno?

87. What is identified behind the cervical pleura:

- + a. vertebralis, ganglion stellatum, ductus thoracicus (to the left), head and neck of the 1st rib, m. longus colli;
- mm. scaleni;
- truncus brachiocephalicus;
- plexus brachialis?

88. What is identified externally and in front of the cervical pleura:

- + mm. scaleni;
- a. vertebralis, ganglion stellatum, ductus thoracicus (to the left), head and neck of the 1st rib, m. longus colli;

- truncus brachiocephalicus;
- plexus brachialis?

89. What is identified externally from the cervical pleura:

- + plexus brachialis;
- mm. scaleni;
- truncus brachiocephalicus;
- plexus brachialis?

90. What is identified medially to the right from the cervical pleura:

- + truncus brachiocephalicus;
- a. carotis communis;
- trachea, esophagus;
- plexus brachialis?

91. What is identified medially to the left from the cervical pleura:

- + a. carotis communis;
- truncus brachiocephalicus;
- ductus thoracicus;
- v. subclavia?

92. What is identified in front and superiorly from the cervical pleura:

- + a. subclavia;
- v. subclavia;
- plexus brachialis;
- ganglion stellatum?

93. What is identified in front of the cervical pleura:

- + v. subclavia;
- a. subclavia;
- trachea, esophagus;
- ductus thoracicus?

94. What is identified behind and medially from the cervical pleura:

- + trachea, esophagus;
- a. subclavia;
- plexus brachialis;
- a. vertebralis?

95. What is attached to mediastinal pleura in anterior-inferior part:

- + pericardium, a. et v. pericardiophrenicae, n. phrenicus;
- n. vagus, a. carotis communis, v. jugularis interna;
- trachea, esophagus;
- plexus brachialis?

96. Where is the right anterior boundary of the pleura to the right identified:

+ from minor supraclavicular fossa to the sternoclavicular joint, and further via manubrium and body of sternum, at the level of cartilage of the 2nd rib it goes behind the medial line, approaches the anterior boundary of the left pleura at the level of the 3rd–4th costal cartilages and ends at the point of attachment of the 6th rib to the breastbone;

– from minor supraclavicular fossa to the sternoclavicular joint, further along the right costal margin;

– from minor supraclavicular fossa to the place of attachment to the 4th rib;

– from minor supraclavicular fossa to the sternoclavicular joint, then goes downwards behind the left costal margin to the cartilage of the 4th rib, circumflexes the heart to the medial cartilage of the 6th rib?

97. Where is the left anterior boundary of the pleura to the left identified:

+ from minor supraclavicular fossa to sternoclavicular joint, goes downwards behind the left costal margin to the cartilage of the

4th rib, circumflexes the heart and descends to the medial cartilage of the 6th rib;

- from minor supraclavicular fossa to sternoclavicular junction, further via manubrium and body of sternum, and at the level of the 2nd rib cartilage goes behind the medial line, then approaches the anterior boundary of the left pleura at the level of the 3rd–4th vertebral cartilages and ends at the place of attachment of the 6th rib to the breastbone;

- from minor supraclavicular fossa to the place of attachment of the 4th rib;

- from major supraclavicular fossa to the breastbone, then goes to the middle of the 5th rib cartilage?

98. What is identified below the 4th rib between anterior boundaries of costal pleura:

- + triangle of safety of Wojnicz-Sianożęcki;
- thymus area;
- area interpleurica superior;
- recessus costomediastinalis?

99. What is the inferior border of pleura on linea medioclavicularis:

- + the 7th rib;
- the 8th rib;
- the 6th rib;
- the 9th rib?

100. What is the inferior border of pleura on linea scapularis:

- + the 11th rib;
- the 10th rib;
- the 9th rib;
- the 8th rib?

101. Identify the length of costodiaphragmatic recess on medial axillary line:

- + from the 7th rib to the 10th rib;
- from the 6th rib to the 9th rib;
- from the 8th rib to the 11th rib;
- from the 4th rib to the 11th rib?

102. What is the penetrating injury of the chest accompanied by:

- + lung collapse, pneumothorax, hemothorax, pleuropulmonary shock;
- enophthalm, total ophthalmoplegia;
- chest pain, dyspnoe, cyanosis, cardiac disturbances;
- arrhythmia?

103. What layers of soft tissues are involved in the first row of sutures in penetrating injury of the thoracic cavity:

- + pleura, internal thoracic fascia, periosteum, intercostal muscles;
- superficial muscles, proper fascia;
- skin and subcutaneous cellular tissue;
- inner thoracic fascia?

104. What layers of soft muscles are involved in the second row of sutures in penetrating injury of the thoracic cavity:

- + superficial muscles, proper fascia;
- pleura, internal thoracic fascia, periosteum;
- internal thoracic fascia;
- skin and subcutaneous cellular tissue?

Test questions and answers for practical lesson № 7

1. How is the tumor developed from the remains of thymus called:

- + thymoma;
- fibrous adenoma;
- lipoma;
- sarcoma?

2. What syndromes are observed at presence of thymus tumor:

- + mediastinal syndrome;
- Petit syndrome;
- Bernard – Horner syndrome;
- syndrome McKenzie?

3. What are the symptoms of thymus tumor:

- + chest pain, dyspnoe, cyanosis, cardiac disturbances;
- enophthalmos, total ophthalmoplegia;
- lung collapse, pneumothorax, hemothorax, pleuropulmonary shock;
- aphonia?

4. Where is the entry of the lungs identified:

- + the 5th–7th thoracic vertebrae or the 2nd–4th rib;
- the 4th–7th thoracic vertebrae or the 1st–2nd rib;
- the 4th–8th thoracic vertebrae or the 4th–7th rib;
- the 5th thoracic vertebra or the 7th rib?

5. What is attached to the medial surface of the left lung behind its root:

- + descending aorta and esophagus;
- v. azygos and v. cava superior;
- v. cava superior, right atrium, pericardium, ascending aorta, n. phrenicus, a. and v. pericardiophrenicae;

– pericardium?

6. What is attached to the medial surface of the left lung in front and inferiorly from the entry:

- + pericardium;
- descending aorta and esophagus;
- v. cava superior and v. azygos;
- n. phrenicus?

7. What is identified in front of the right lung entry:

- + v. cava superior, right atrium, pericardium, ascending aorta, n. phrenicus, a. et v. pericardiacophrenicae;
- v. azygos;
- descending aorta and esophagus;
- bifurcation of trachea?

8. What is located superiorly and posteriorly from the right lung root:

- + v. azygos;
- v. cava superior, right atrium, pericardium, ascending aorta, n. phrenicus, a. et v. pericardiacophrenicae;
- arch of aorta;
- n. phrenicus?

9. What is attached to the root of the left lung from above:

- + arch of aorta;
- v. cava superior, right atrium, pericardium, ascending aorta;
- n. phrenicus, a. et v. pericardiacophrenicae;
- n. phrenicus;
- esophagus?

10. What is attached to the root of the left lung from behind:

- + esophagus, descending aorta, n. vagus;
- v. azygos;

- v. cava superior, right atrium, pericardium, ascending aorta,
- n. phrenicus, a. et v. pericardiophrenicae;
- arch of aorta?

11. What crosses both roots of the lungs anteriorly:

- + n. phrenicus, a. et v. pericardiophrenicae;
- n. vagus;
- truncus sympathicus;
- arch of aorta?

12. What crosses both roots of the lungs posteriorly:

- + n. vagus;
- n. phrenicus a. et v. pericardiophrenicae;
- truncus sympathicus;
- arch of aorta?

13. What is the projection of fissura obliqua:

- + from spinal process of the 3rd thoracic vertebra to the place of junction of osseous part with cartilaginous part of the 6th rib;
- from the osseous process of the 4th thoracic vertebra to the place of attachment of the 6th costal cartilage to the breastbone;
- along the 4th costal cartilage, from the breastbone to the place of junction with the projection of oblique fissure along medial axillary line;
- from the breastbone to the medial axillary line?

14. What is the projection of fissura horizontalis:

- + the 4th costal cartilage, from the breastbone to the place of junction with the projection of oblique fissure along medial axillary line;
- from spinal process of the 3rd thoracic vertebra to the place of junction with osseous and cartilaginous part of the 6th rib;
- to the place of attachment of the 6th costal cartilage to the breastbone;
- from the breastbone to the medial axillary line?

lung: 15. What are the segments of the superior part of the right

- + apical, posterior, anterior;
- lateral, medial;
- medial basal;
- apical, medial basal, anterior basal?

lung: 16. What are the segments of the medial part of the right

- + lateral, medial;
- posterior, anterior;
- anterior basal;
- apical, medial basal, anterior basal, lateral basal, posterior basal?

lung: 17. What are the segments of the inferior part of the right

- + apical, medial basal, anterior basal, lateral basal, posterior basal;
- superior lingular and inferior lingular;
- apical posterior;
- lateral, medial?

lung: 18. What are the segments of the superior part of the left

- + apical posterior, anterior, superior lingular and inferior lingular;
- lateral, medial;
- apical;
- apical, medial basal, anterior basal, lateral basal, posterior basal?

19. How is the lateral approach to the organs of the thoracic cavity performed:

- + from the medial clavicular line to the posterior axillary line in the 4th–5th intercostal space;
- from the costal margin to scapular line in the 3rd–4th intercostal space;
- from the vertebral column to anterior axillary line in the 2nd–4th intercostal space;
- on medial axillary line?

20. What tissues are dissected at lateral approach to the organs of the chest:

- + all of the following;
- skin, subcutaneous cellular tissue and superficial fascia, thoracic fascia;
- m. pectoralis major, m. serratus anterior, intercostal muscles;
- internal thoracic fascia, parietal pleura?

21. How is the posterior lateral approach to the organs of the thoracic cavity performed:

- + from spinal processes of the 3rd–4th thoracic vertebrae on paravertebral line, around the angle of scapula and further on the 6th–7th intercostal space to anterior axillary line;
- from medial clavicular line to the posterior axillary line in the 4th–5th intercostal space;
- from the vertebral column to the anterior axillary line in the 2nd–4th intercostal space;
- all the above mentioned?

22. What tissues are dissected at posterior lateral approach to the organs of the thoracic cavity:

- + all of the following;
- skin, subcutaneous cellular tissue, superficial fascia, m. trapezius;
- mm. rhomboideus major et minor, m. latissimus dorsi, m. serratus anterior;

– intercostal muscles, internal thoracic fascia, parietal pleura?

23. What is identified in the root of the right lung anteriorly:

- + v. pulmonalis superior;
- a. pulmonalis;
- major bronchus;
- v. pulmonalis inferior?

24. What is identified superiorly and behind v. pulmonalis superior in the root of the right lung:

- + a. pulmonalis;
- major bronchus;
- v. azygos;
- n. phrenicus?

25. Where is the major bronchus of the right lung root identified:

- + above and behind a. pulmonalis;
- below and behind a. pulmonalis;
- in front of a. pulmonalis;
- below a. pulmonalis?

26. What is identified in the left lung root anteriorly:

- v. pulmonalis superior;
- a. pulmonalis;
- major bronchus;
- v. pulmonalis inferior?

27. Where is a. pulmonalis in the left lung root located:

- + above and behind v. pulmonalis superior;
- below and behind v. pulmonalis superior;
- above and behind major bronchus;
- below and behind major bronchus?

28. Where is the major bronchus in the left lung root located:

- + below and behind a. pulmonalis;

- above and behind a. pulmonalis;
- above and in front of a. pulmonalis;
- superiorly and in front of v. pulmonalis superior?

29. What is the first stage of the operation on the lungs:

- + pneumolysis;
- skeletonization of the lung root vessels;
- cutting and ligation of the pulmonary vein;
- all the above mentioned?

30. What are the organs of superior mediastinum:

- + thymus, vv. brachiocephalicae dextra et sinistra, v. cava superior, arcus aortae, trachea, upper part of esophagus, ductus thoracicus, n. vagus, n. phrenicus;
- v. azygos et v. hemiazygos;
- a. et v. thoracica interna, paramammary lymph nodes, distal part of thymus;
- pericardium, heart?

31. What are the organs of anterior mediastinum:

- + a. et v. thoracica interna, paramammary lymph nodes, distal part of thymus;
- pericardium, heart;
- intracardiac parts of large vessels;
- thymus, vv. brachiocephalicae dextra et sinistra, v. cava superior, arcus aortae, trachea, upper part of esophagus, ductus thoracicus, n. vagus, n. phrenicus?

32. Identify the organs of medial mediastinum:

- + pericardium, heart, bifurcation of trachea, aa. Et vv. pulmonales, n. phrenicus, a. et v. pericardiophrenica;
- a. et v. thoracica interna, upper part of the esophagus, ductus thoracicus, arch of aorta with vessels;
- esophagus, aorta, ductus thoracicus, v. azygos et v. hemiazygos;

- truncus sympathicus, n. vagus?

33. Identify the organs of posterior mediastinum:

- + esophagus, aorta, ductus thoracicus, v. azygos et v. hemiazygos, truncus sympathicus, n. vagus;
- pericardium, heart, bifurcation of trachea, aa. et vv. pulmonales, n. phrenicus, a. et v. pericardiophrenica;
- a. et v. thoracica interna, paramammary lymph nodes, distal part of thymus;
- v. cava superior?

34. Where is the first layer of posterior pericardial cellular space identified:

- + between posterior surface of breastbone and posterior pericardial Rudnief fascia;
- between Rudnief fascia and Meyer fascia;
- between Rudnief fascia and anterior surface of pericardium;
- between Meyer fascia and anterior surface of pericardium?

35. Where is the second layer of back pericardial cellular space identified:

- + between Rudnief fascia and Meyer fascia;
- between the posterior surface of breastbone and posterior pericardial Meyer fascia;
- between Meyer fascia and posterior surface of breastbone;
- between the posterior surface of breastbone and Meyer fascia?

36. What is pretracheal cellular tissue of mediastinum limited by:

- + bifurcation of trachea, arch of aorta, a. pulmonalis, v. cava superior;
- esophagus, vertebral column, fascia prevertebralis;

- aa. et vv. pulmonales, n. phrenicus, a. et v. pericardiacophrenica;
- all the above mentioned?

37. Where can the pus from the posterior pericardial cellular space extend:

- + into the pretracheal space of the neck, along the anterior surface of pericardium to the diaphragm, Larrey's cleft and Morgagni fissure in preperitoneal cellular tissue;
- through hiatus esophageus of diaphragm into retroperitoneal cellular tissue;
- through Bochdalek foramen in retroperitoneal cellular tissue;
- all the above mentioned?

38. What is the surgical approach to drainage of anterior mediastinitis:

- + cervical, transsternal, transpleural mediastinotomy;
- posterior mediastinotomy by Nasilov;
- inferior lateral, posterior lateral and lateral thoracotomy;
- longitudinal sternotomy by Milton, through double pleural approach to the 4th intercostal space with transverse crossing of the breastbone?

39. Where can infection spread in posterior mediastinitis:

- + in spatium retroviscerale of the neck through hiatus esophageus, through hiatus aorticus and through Bochdalek foramen in retroabdominal cellular tissue;
- in pretracheal space of the neck, along the anterior surface of pericardium to the diaphragm, through Larrey's cleft in periabdominal cellular tissue;
- through Morgagni fissure in periabdominal cellular tissue;
- all the above mentioned?

40. What surgical approach is used to drain posterior mediastinitis:

- + all of the following;
- posterior extrapleural mediastinotomy by Nasilov;
- paravertebral incision with the resection of ribs;
- transperitoneal mediastinotomy by Savinykh – Rozanov?

41. What is identified in front of thymus:

- + breastbone;
- v. cava superior;
- v. brachiocephalica sinistra;
- mediastinal pleura?

42. What is identified laterally from thymus:

- + mediastinal pleura;
- vv. brachiocephalica dextra et sinistra;
- truncus brachiocephalicus;
- all the above mentioned?

43. What is identified behind thymus:

- + vv. brachiocephalica dextra et sinistra, v. cava superior, arch of aorta, pericardium;
- ductus thoracicus, esophagus, n. vagus;
- truncus brachiocephalicus;
- all the above mentioned?

44. What is attached to v. brachiocephalica dextra anteriorly:

- + thymus;
- v. cava superior;
- pericardium;
- n. vagus?

45. What is attached to v. brachiocephalica dextra laterally:

- + mediastinal pleura, n. phrenicus dexter;
- v. cava superior, mediastinal pleura;

- ascending aorta;
- truncus brachiocephalicus, n. vagus?

46. What is located posteriorly from v. brachiocephalica dextra:

- + truncus brachiocephalicus, n. vagus;
- mediastinal pleura, n. phrenicus dexter;
- esophagus, ascending aorta;
- all the above mentioned?

47. What is identified posteriorly from v. brachiocephalica sinistra:

- + all of the following;
- n. vagus, truncus brachiocephalicus;
- a. carotis communis sinistra, a. subclavia sinistra;
- arch of aorta?

48. Where is v. cava superior identified:

- + all of the following;
- behind the right costal margin;
- from the 1st to the 3rd rib;
- to the right from ascending aorta?

49. What is identified in front of aortic arch:

- + v. brachiocephalica sinistra, n. vagus, n. phrenicus;
- v. cava superior, truncus pulmonalis, n. laryngeus recurrens;
- a. carotis communis sinistra, a. subclavia sinistra;
- all the above mentioned?

50. What is identified behind the arch of aorta:

- + trachea, esophagus, ductus thoracicus, n. laryngeus recurrens sinister;
- v. brachiocephalica sinistra, n. vagus, n. phrenicus;
- a. carotis communis sinistra, a. subclavia sinistra;

– all the above mentioned?

51. Identify organs located intrapericardially:

- + apex of the heart, both ventricles, ascending aorta, pulmonary trunk, left and right atrial auricles;
- vena cava, both atria, pulmonary veins and arteries;
- base of the heart, right auricle;
- all the above mentioned?

52. Identify organs located mesopericardially:

- + vena cava, both atria;
- apex of the heart, both ventricles, ascending aorta, pulmonary trunk, left and right atrial auricles;
- base of the heart, right auricle;
- all the above mentioned?

53. Identify organs located extrapericardially:

- + pulmonary arteries and veins;
- vena cava, both atria;
- apex of the heart, both ventricles, ascending aorta, pulmonary trunk, left and right atrial auricles;
- all the above mentioned?

54. Identify the walls of pericardium:

- + sternocostal wall, mediastinal, posterior, diaphragmatic;
- two lateral or pulmonary walls, sternum, costal, vertebral;
- right and left pulmonary surfaces, precardiac-ventricular wall;
- anterior and posterior interventricular walls, diaphragmatic wall?

55. What part of pericardium does not include mediastinal pleura and can be used for puncture:

+ edges of the left costal cartilages from the 5th to the 7th, left inferior third of the body of the sternum, left superior third of xiphoid process;

– ends of the left costal cartilages from the 5th to the 6th, left superior third of sternum, left inferior third of xiphoid process;

– ends of the right costal cartilages from the 5th to the 7th, right inferior third of the body of the sternum, right superior third of xiphoid process?

56. What is attached to the lateral surface of pericardium:

+ mediastinal pleura, n. phrenicus, vasa pericardiacophrenicae;

– n. vagus, n. laryngeus recurrens, v. azygos;

– v. cava superior, pulmonary veins, aorta, pulmonary trunk;

– v. cava inferior?

57. What passes through the right part of inferior wall to the pericardial cavity:

+ v. cava inferior;

– mediastinal pleura, n. phrenicus, vasa pericardiacophrenicae;

– pulmonary trunk;

– all the above mentioned?

58. What is the posterior wall of pericardium attached to:

+ all of the following;

– lower part of trachea, esophagus, v. azygos;

– thoracic lymphatic duct;

– thoracic aorta, left vagus nerve?

59. Where are vortex of pericardium identified:

+ in the area of passage of parietal leaf of serous pericardium to a visceral one;

– between the fibrous leaf of pericardium and parietal leaf of serous pericardium;

- in the anterior-inferior part of pericardium;
- between fibrous and serous pericardium?

60. What can develop in acute cardiac tamponade:

- + Beck's triad;
- Naffziger's syndrome;
- Takayasu syndrome;
- Loreen-Epstein?

61. What is Beck's triad characterized by:

- + sharp reduction of arterial pressure, considerable increase of central venous pressure, absence of heart pulsation in X-ray examination;
- increase of arterial pressure, reduction of venous pressure, increase of liquor pressure, arrhythmia;
- mediastinopericarditis, chest pain behind the breastbone, enlarged heart revealed by X-ray;
- sharp reduction of heart beat, considerable increase of central venous pressure?

62. What is necessary to do in adhesive pericarditis:

- + pericardectomy, cardiolysis;
- pneumolysis;
- fundoplication;
- periaortic plexectomy?

63. What is the right boundary of the heart composed by:

- + v. cava superior, right atrium;
- v. cava inferior, right ventricle;
- left atrium;
- left ventricle, left auricle, pulmonary trunk?

64. What is the inferior boundary of the heart composed by:

- + right ventricle;
- left atrium;

- left ventricle, left auricle, pulmonary trunk;
- right atrium?

65. What is the left boundary of the heart composed by:

- + left ventricle, left auricle, pulmonary trunk;
- left atrium;
- v. cava inferior;
- v. cava superior, right atrium?

66. Where is the right boundary of the heart identified:

- + from the superior margin of the 3rd costal cartilage 2–2.5 cm from the right sternal line to the inferior margin of the 5th costal cartilage;
- from the inferior margin of the 3rd costal cartilage 2–2.5 cm to the middle of the right sternal line;
- to the superior margin of the 5th costal cartilage to the right, left and downwards across the 5th intercostal space crossing the point of attachment of the 6th costal cartilage;
- to the right side of breastbone, the 6th left intercostal space crossing the cartilage of the 6th rib, ends in the 5th intercostal space not reaching 0.5–1.5 cm the left medial clavicle line?

67. Where is the inferior boundary of the heart identified:

- + it goes to the right, left and downwards across the 5th intercostal space, crossing the place of attachment of the 6th costal cartilage to the sternum on the right, to the 6th intercostal space on the left, crossing the cartilage of the 6th rib, ends in the 5th intercostal space at distance of 0.5–1.5 cm to the left medial clavicular line;
- from the inferior margin of the 3rd costal cartilage, 2–2.5 cm to the middle of the right sternal line;
- from the superior margin of the 3rd costal cartilage to the superior margin of the 5th costal cartilage;

- from the superior margin of the 3rd costal cartilage, 2–2.5 cm from the right sternal line to the inferior margin of the 5th costal cartilage?

68. Where is the left boundary of the heart identified:

- + from the 5th intercostal space arcuate to the level of the 3rd rib not reaching 2–3 cm the level of sternum, going upwards to the 2nd intercostal space 2 cm to the left sternal line;

- from the inferior margin of the 3rd costal cartilage, 2–2.5 cm to the middle of the right sternal line;

- from the 5th intercostal space to the superior margin of the 5th costal cartilage;

- from the superior margin of the 3rd costal cartilage, 2–2.5 cm from the right sternal line to the inferior margin of the 5th costal cartilage?

69. Identify the surfaces of the heart:

- + sternocostal, diaphragmatic, pulmonary;

- sternocostal, mediastinal, posterior, diaphragmatic;

- two lateral or pulmonary surfaces, costal, vertebral;

- precardiac ventricular, anterior and posterior interventricular, diaphragmatic?

70. What is the root of the heart composed by:

- + vena cava, pulmonary veins;

- aorta, pulmonary trunk;

- v. cava superior;

- v. cava inferior?

71. What is identified between the anterior and lateral surfaces of the heart:

- + obtuse margin;

- acute margin;

- coronary sulcus;

- sulcus interventricularis anterior?

72. What is identified between the anterior and inferior surfaces of the heart:

- + acute margin;
- obtuse margin;
- coronary sulcus;
- sulcus interventricularis anterior?

73. Identify the direction of coronary sulcus:

- + from left to right, from up to down;
- horizontally, from up to down;
- vertically;
- over anterior medial surface?

74. Where is pacemaker located:

- + under the epicardium on anterior-medial surface at the entrance of v. cava superiorly to the right atrium;
- under the myocardium on anterior-lateral surface at the entrance of v. cava inferiorly to the right atrium;
- below the endocardium, on the interatrial septum;
- below the epicardium, on the sternocostal surface, the point of opening of the pulmonary trunk?

75. What is a common type of blood supply among the population:

- + right;
- left;
- uniform;
- all the above mentioned?

76. What is necessary to be done in ineffective conservative treatment of arrhythmic patients:

- + implantation of pacemaker;
- aortocoronary shunting;
- mammary coronary anastomosis;
- angioplasty?

77. Where do the majority of large veins open:

- + into sinus coronarius;
- into the right atrium;
- into v. cordis magna;
- into v. cordis media?

78. What can be done during the operation of aortocoronary shunting to eradicate the spasm of coronary arteries in postoperation period:

- + periaortic neurectomy;
- implantation of pacemaker;
- mammary coronary anastomosis;
- maintainance of extracorporeal blood circulation?

79. What operations are performed for myocardial revascularization in treatment of IHD?

- + all of the following;
- balloon angioplasty of coronary sulcus;
- mammary coronary anastomosis;
- aortic coronary shunting?

80. What is sinus transversus pericardii in front and from above limited by:

- + ascending aorta and pulmonary trunk;
- v. cava superior et v. cava inferior;
- right atrium and right auricle;
- parietal leaf of pericardium that covers a. pulmonalis dextra?

81. What is sinus transversus pericardii from behind limited by:

- + parietal leaf of pericardium that covers right a. pulmonalis;
- posterior wall of pericardium between the confluence of pulmonary veins;
- v. cava superior et v. cava inferior;

- ascending aorta and pulmonary trunk?

82. What is sinus transversus pericardii from below limited by:

- + right and left atria;
- parietal leaf of pericardium that covers a. pulmonalis dextra;
- truncus pulmonalis;
- all the above mentioned?

83. What is the entrance to sinus transversus pericardii from the right limited by:

- + right margin of ascending aorta;
- v. cava superior;
- right atrium and right auricle;
- truncus pulmonalis?

84. What is the entrance to sinus transversus pericardii posteriorly to the right limited by:

- + v. cava superior;
- posterior wall of pericardium between the confluence of pulmonary veins;
- ascending aorta;
- pulmonary trunk?

85. What is the entrance to sinus transversus pericardii inferiorly to the right limited by:

- + right atrium and right auricle;
- v. cava inferior and truncus pulmonalis;
- ascending aorta and pulmonary trunk;
- pulmonary trunk and left auricle?

86. What is the entrance to sinus transversus pericardii in front and from above limited by:

- + pulmonary trunk and left auricle;

- right atrium and right auricle;
- pericardial fold (Marshall fold) that goes from the left pulmonary artery to the left superior pulmonary vein;
- v. cava superior?

87. What is the entrance to sinus transversus pericardii posteriorly from the left limited by:

- + pericardial fold that goes from the left pulmonary artery to the left pulmonary vein;
- pulmonary trunk and left auricle;
- v. cava superior;
- left atrium?

88. What is the entrance to sinus transversus pericardii from the left limited by:

- + left atrial auricle;
- v. cava inferior;
- truncus pulmonalis;
- ascending aorta?

89. What is sinus obliquus pericardii in front limited by:

- + posterior surface of the left atrium;
- left atrial auricle;
- v. cava superior;
- pulmonary trunk?

90. What is sinus obliquus pericardii from behind limited by:

- + posterior wall of pericardium between the confluence of pulmonary veins;
- v. cava superior;
- arch of aorta;
- posterior surface of the left atrium?

91. What is sinus obliquus pericardii inferiorly from the right limited by:

- + v. cava inferior;
- v. cava superior;
- confluence of the left pulmonary veins;
- left atrium?

92. What is sinus obliquus pericardii from the left above limited by:

- + left pulmonary veins;
- right pulmonary veins;
- v. cava superior;
- truncus pulmonalis?

93. What are the ways to perform puncture of pericardium on the side of xiphoid process:

- + Larrey and Marfan's;
- Pirogov and Karavanov's;
- Lotheissen and Reich's;
- Wojnicz-Sianożęcki?

94. Where is the point of puncture needle in pericardial puncture according to Larrey's technique located:

- + in the angle composed by xiphoid process and attachment to the 7th costal cartilage;
- below the apex of xiphoid process;
- in the 4th intercostal space to the left, 2 cm from the sternum;
- in the 5th intercostal space to the left, 2 cm from the sternum?

95. Where is the point of puncture needle according to Marfan's technique located:

- + under the apex of xiphoid process;
- in the angle composed by xiphoid process and attachment of the 7th costal cartilage;

- in the 4th intercostal space to the left, 2 cm from the sternum;
- in the 5th intercostal space to the left, 2 cm from the sternum?

96. What is the purpose of performing periaortic plexectomy:

- + to eradicate spasm of coronary arteries by crossing preganglionic parasympathetic fibers that are the parts of vagus nerve, to relieve pain by crossing afferent sympathetic fibers;
- to eradicate arrhythmia;
- to eradicate spasm of coronary arteries by crossing afferent sympathetic fibers;
- to relieve pain by crossing preganglionic parasympathetic fibers that are the part of n. vagus?

97. What is the way to expose pericardium in heart wounds:

- + longitudinal and parallel, in front of n. phrenicus;
- transverse and behind n. vagus;
- parallel to the front between confluence of the left pulmonary veins;
- all the above mentioned?

98. What is the way to drain pericardial cavity at suturing heart wounds:

- + pleural cavity is drained in the 7th–8th intercostal space to make the “window” in the inferior part of pericardium;
- through the drainage tube output into the 4th intercostal space on the medial axillary line;
- all the above mentioned?

99. What is the passage of arterial duct (Botallo duct):

- + all of the following;
- leaving the arch of aorta;
- opposite the left subclavicular artery;
- entering the bifurcation of pulmonary trunk?

100. What is identified on the anterior wall of arterial duct:

- + mediastinal pleura, n. vagus, n. phrenicus;
- esophagus, inferior vena cava;
- sympathetic trunk, v. portae;
- recurrent nerve?

101. What is identified between the posterior wall of arterial duct (Botallo duct) and major bronchus of the left lung:

- + recurrent nerve;
- mediastinal pleura, n. vagus, n. phrenicus;
- brachiocephalic trunk, sympathetic trunk, v. portae;
- thoracic lymphatic duct?

102. What special instruments are used to perform mitral commissurotomy:

- + Satinsky clamp, Dubost's expander, Rummel tourniquet, Schumacher's sternotome;
- Payr's clamp, Langenbeck's hook, Mikulicz expander, clamp of Dogliotti – Vyshnevsky;
- fenestrated Potts forceps, Dothril's clamp, Bier's arc saw;
- all the above mentioned?

103. Identify the boundary of superior mediastinum:

- + from above – upper than the lung roots, below the point of joining the body with the presternum in the direction of the 4th vertebra;
- above the level of lung roots, below the line of tracheal bifurcation;
- from above – below the lung roots and the point of joining the body of the breastbone with xiphoid process in the direction of the 6th vertebra;
- from above – upper than the superior margin of aortic arch, below the point of joining the body of the breastbone with its xiphoid process in the direction of the 4th vertebra?

Test questions and answers for practical lesson № 8

1. What are the boundaries of superior third of thoracic part of esophagus:

- + from ThII to ThIV vertebra to the superior margin of aortic arch;
- from CIV to CVI vertebra to tracheal bifurcation;
- from ThIV to ThVI vertebra to the level of diaphragm;
- from ThV to ThVII vertebra from the superior margin of aortic arch to tracheal bifurcation?

2. What are the boundaries of the medial third of thoracic part of esophagus:

- + from ThV to ThVII vertebra, from the superior margin of aortic arch to tracheal bifurcation;
- from ThVIII to ThX, from tracheal bifurcation to the diaphragm;
- from ThIV to ThVI vertebra to the level of diaphragm
- from ThII to ThIV vertebra to the level of the superior margin of aortic arch?

3. What are the boundaries of the inferior third of thoracic part of esophagus:

- + from ThVIII to ThX, from tracheal bifurcation to diaphragm;
- from ThV to ThVII vertebra, from the superior margin of aortic arch to tracheal bifurcation;
- from ThVIII to ThX, from tracheal bifurcation to the entrance of stomach;
- from ThII to ThIV vertebra to the level of the superior margin of aortic arch?

4. Identify the level of pharyngeal narrowing of esophagus:

- + at the level of the 6th cervical vertebra;
- at the level of the 4th cervical vertebra;

- at the level of the 5th cervical vertebra;
- at the level of the 7th cervical vertebra?

5. At what level is the aortic narrowing of esophagus located:

- + at the level of the 4th thoracic vertebra;
- at the level of the 5th thoracic vertebra;
- at the level of the 6th thoracic vertebra;
- at the level of the 3rd thoracic vertebra?

6. Where is bronchial narrowing of esophagus identified:

- + at the level of the 5th thoracic vertebra;
- at the level of the 4th thoracic vertebra;
- at the level of the 6th thoracic vertebra;
- at the level of the 3rd thoracic vertebra?

7. At what level is the diaphragmatic narrowing of esophagus located:

- + the 9th–10th thoracic vertebrae;
- the 8th thoracic vertebra;
- the 9th thoracic vertebra;
- the 12th thoracic vertebra?

8. Identify skeletopy of the left superior flexure of esophagus:

- + from the 6th cervical vertebra to the 2nd thoracic vertebra;
- from the 3rd thoracic vertebra to the 4th thoracic vertebra;
- from the 3rd cervical vertebra to the 3rd thoracic vertebra;
- from the 2nd thoracic vertebra to the 5th thoracic vertebra?

9. Identify skeletopy of the right flexure of esophagus:

- + from the 2nd thoracic vertebra to the 5th thoracic vertebra;
- from the 6th cervical vertebra to the 5th thoracic vertebra;
- the level of the 8th thoracic vertebra;
- from the 3rd thoracic vertebra to the 9th–10th thoracic vertebrae?

10. Identify surgical approach to the cervical part of esophagus:

- + left lateral on the anterior margin of sternocleidomastoid muscle;
- right lateral on the anterior margin of sternocleidomastoid muscle;
- along medial cervical line;
- Kocher's collar incision?

11. What is the surgical approach to the medial sternal part of esophagus:

- + right lateral transpleural;
- left lateral transpleural;
- Savinykh – Rozanov's sagittal diaphragmotomy;
- Milton's longitudinal sternotomy?

12. What is the surgical approach to the inferior thoracic part of esophagus:

- + left lateral transpleural, transabdominal sagittal diaphragmotomy (Savinykh – Rozanov's);
- right lateral transpleural;
- longitudinal sternotomy (Milton's)?

13. Identify the interrelationship of the esophagus with mediastinal pleura above the root of the lungs:

- + right mediastinal pleura is attached to the lateral wall of esophagus, the left one forms a fold that is exposed between the column and left subclavicular artery;
- right mediastinal pleura is separated from esophagus by v.azygos;
- the left mediastinal pleura is separated from esophagus by descending aorta;
- to the right esophagus is separated from the pleura by azygos vein, to the left it is separated from the pleura by thoracic aorta?

14. Identify the interrelationship between esophagus and mediastinal pleura at the level of the root of the lung:

- + to the right esophagus is separated from the pleura by v.azygos, to the left – by thoracic aorta;

- to the right mediastinal pleura covers the lateral wall of the esophagus;

- to the left esophagus covers mediastinal pleura laterally and posteriorly;

- to the right mediastinal pleura covers lateral and posterior wall of esophagus, to the right it is separated from esophagus by thoracic aorta?

15. What is interrelationship between esophagus and mediastinal pleura below the root of the lungs:

- + mediastinal pleura covers lateral and posterior wall of esophagus from the right, from the left it is separated from esophagus by thoracic aorta;

- from the right mediastinal pleura is separated from esophagus by v. azygos;

- from the left mediastinal pleura covers lateral wall of esophagus;

- right mediastinal pleura is attached to the lateral wall of esophagus, the left mediastinal pleura forms a fold that is exposed between the vertebral column and left subclavicular artery?

16. What is identified to the left and behind esophagus:

- + pars descendens aortae;

- v. azygos;

- ductus thoracicus;

- truncus sympathicus?

17. What is identified to the right from esophagus and behind it:

- + v. azygos;

- aorta;

- v. hemiazygos;
- truncus sympathicus?

18. What is identified behind esophagus:

- + ductus thoracicus, right posterior intercostal arteries, terminal parts of v. hemiazygos et v. hemiazygos accessoria;
- v. azygos, truncus sympathicus, n. vagus to the left;
- n. laryngeus recurrens dexter et sinister;
- n. laryngeus recurrens sinister, a. carotis communis sinistra?

19. What is attached to the esophagus in front of the superior third of thoracic part:

- + n. laryngeus recurrens sinister, a. carotis communis sinistra;
- a. subclavia sinistra;
- ductus thoracicus, right posterior intercostal arteries, terminal parts of v. hemiazygos et v. hemiazygos accessoria;
- truncus brachiocephalicus?

20. What is attached to the superior third of thoracic part of esophagus to the right:

- + mediastinal pleura;
- ductus thoracicus, a. subclavia sinistra;
- n. laryngeus recurrens sinister;
- a. subclavia dextra?

21. What is attached to the superior third of thoracic part of esophagus to the left:

- + ductus thoracicus, a. subclavia sinistra;
- a. carotis communis sinistra;
- aortic arch, tracheal bifurcation, left major bronchus;
- n. laryngeus recurrens sinister?

22. What is attached to the medial third of thoracic part of esophagus in front:

- + arch of aorta, bifurcation of pleura, left major bronchus;

- ductus thoracicus, a. subclavia sinistra;
- n. vagus sinister;
- mediastinal pleura?

23. What is attached to the medial third of sternal part of esophagus to the left:

- + pars descendens aortae;
- tracheal bifurcation, truncus sympathicus;
- n. laryngeus recurrens sinister;
- n. vagus dexter, v. azygos?

24. What is attached to the medial third of thoracic part of esophagus to the right:

- + n. vagus dexter, v. azygos;
- ductus thoracicus;
- truncus sympathicus;
- mediastinal pleura?

25. What is attached to the inferior third of thoracic part of esophagus in front:

- + pericardium;
- aorta;
- tracheal bifurcation;
- ductus thoracicus?

26. What is attached to the inferior third of thoracic part of esophagus to the right:

- + n. vagus, mediastinal pleura;
- v. azygos;
- ductus thoracicus, truncus sympathicus;
- pericardium?

27. What is attached to the inferior third of sternal part of the esophagus to the left:

- + n. vagus;

- mediastinal pleura;
- ductus thoracicus;
- truncus sympathicus?

28. What is the location of ductus thoracicus in posterior mediastinum:

- + all of the following;
- on the anterior surface of vertebral column;
- behind esophagus;
- to the left from v. azygos and to the right from aorta?

29. Where is v. azygos in posterior mediastinum located:

- + all of the following;
- on the anterior right surface of vertebral column, in front of right posterior intercostal arteries;
- behind and to the right from esophagus;
- laterally from the sternal duct, medially from the right sympathetic trunk?

30. Where is v. hemiazygos in posterior mediastinum located:

- + all of the following;
- over the left anterior lateral surface of thoracic vertebrae bodies;
- laterally and posteriorly from thoracic artery;
- anteriorly and medially from truncus sympathicus?

The list of theoretical questions on the theme “Clinical anatomy and operative surgery of the head, neck, and chest” to the final modular control

1. Surgical anatomy of the fronto-parieto-occipital region: boundaries, layer-by-layer structure, blood supply, innervation, lymphatic efflux.
2. Clinical anatomy of the temporal region: boundaries, layer-by-layer structure, blood supply, innervation.
3. Clinical anatomy of the mastoid process.
4. Surgical anatomy of the meninges, intermeningeal spaces, venous sinuses, and CSF flow pathways.
5. Blood supply to the brain.
6. Surgical anatomy of the internal cranial base, topographic anatomy of cranial nerves.
7. Clinical manifestations of the anterior, middle, and posterior cranial fossa fractures.
8. Blood supply and innervation of the dura mater.
9. Kronlein’s scheme of craniocerebral topographic anatomy.
10. Initial surgical debridement of penetrating and non-penetrating craniocerebral traumas: local or general anesthesia, washing, cleaning, tissue dissection and wound revision, debriding, bleeding control, restoration of normal anatomical connections of the tissues by layered closure.
11. Osteoplastic trepanation by Olivecron: indications, technique.
12. Decompressive craniectomy by Cushing: indications, technique.
13. Mastoidectomy: indications, technique.
14. Clinical anatomy of the buccal region: boundaries, blood supply, lymphatic and venous outflow pathways. The role of venous network in spreading inflammation.
15. Clinical anatomy of the parotid-masseteric region. Surgical anatomy of the parotid glands.
16. Surgical treatment of suppurative parotitis.

17. Surgical anatomy of the facial nerve. Topical diagnosis of facial nerve injuries.
18. Means of facial muscle neurotization in facial nerve injuries.
19. Clinical anatomy of the deep facial region. Surgical anatomy of the temporopterygoid and interpterygoid spaces.
20. Surgical anatomy of the pterygopalatine fossa.
21. Surgical anatomy of peripharyngeal and retropharyngeal spaces. Means of drainage.
22. Pathways of spreading purulent inflammatory processes of the face; making incisions for drainage.
23. Extra-oral maxillary and mandibular nerve block by S. N. Weisblat.
24. Surgical anatomy of the frontal sinus. Jansen–Ritter operation.
25. Surgical anatomy of the maxillary sinus. Caldwell-Luc-Ivanov operation.
26. Regions and triangles of the neck.
27. Surgical anatomy of the cervical fascia by V. N. Shevkunenko.
28. Tissue spaces of the neck and incisions for their drainage.
29. Clinical anatomy of the submandibular triangle.
30. Surgical anatomy of the submandibular salivary gland.
31. Clinical anatomy of the carotid triangle.
32. Surgical anatomy of the major neurovascular bundle of the neck.
33. Clinical anatomy of the sternocleidomastoid region.
34. Surgical anatomy of the cervical plexus.
35. Cervical plexus block anesthesia: indications, technique.
36. Surgical anatomy of the cervical sympathetic trunk.
37. Vishnevskyi vagosympathetic block: indications, technique.
38. Clinical anatomy of the antescalene space (spatium antescalenum).

39. Clinical anatomy of the scalenovertebral triangle (trigonum scalenovertebrale).
40. Surgical anatomy of the cervical part of the thoracic lymph duct.
41. Thoracic lymph duct drainage: indications, technique.
42. Clinical anatomy of the lateral triangle of the neck.
43. Clinical anatomy of the interscalene space.
44. Surgical treatment of scalenus syndrome (Naffziger syndrome).
45. Surgical anatomy of the brachial plexus and its supraclavicular branches.
46. Kulenkampff brachial plexus block: indications, technique.
47. Surgical anatomy of the thyroid gland and parathyroid glands.
48. Mykolaiev subtotal subfascial resection of the thyroid gland modified by Bondarenko: indications, technique.
49. Surgical anatomy of the larynx.
50. Surgical anatomy of the trachea.
51. Upper and lower tracheotomy: indications, technique, complications.
52. Surgical anatomy of the pharynx. Drainage of the retropharyngeal space.
53. Surgical anatomy of the cervical esophagus. Esophagotomy: indications, technique.
54. Exposure of the common carotid artery and external carotid artery: indications, technique.
55. Collateral circulation in internal carotid artery occlusion.
56. Carotid thrombectomy: indications, technique.
57. Clinical anatomy of the subclavian region. Surgical anatomy of the superficial subpectoral space and deep subpectoral space: contents and incisions for drainage.
58. Surgical anatomy of the subclavian vein. Paget-Schroetter syndrome. Subclavian vein exposure. Thrombectomy. Venoplasty.

59. Seldinger technique of subclavian vein puncture and catheterization.

60. Exposure of the subclavian artery by Dzhanlidze and Petrovskiy. Pathways of collateral circulation after subclavian artery ligation.

61. Surgical anatomy of the mammary gland.

62. Surgical treatment of suppurative mastitis and benign mammary tumors.

63. Mastectomy by Halsted–Meyer and Patey-Dyson: indications, technique.

64. Surgical anatomy of the intercostal space. Intercostal nerve block: indications, technique.

65. Surgical anatomy of the internal thoracic artery. Mammary coronary artery anastomosis: indications, technique.

66. Surgical anatomy of the pleura and pleural recesses. Pleural puncture: indications, technique.

67. Initial surgical debridement of penetrating chest traumas.

68. Surgical anatomy of the diaphragm. Hiatal hernias. Nissen fundoplication.

69. Mediastinum and its parts. Surgical anatomy of organs, vessels, and nerves of the superior mediastinum (thymus, brachiocephalic veins, superior vena cava, aortic arch, brachiocephalic trunk, left common carotid artery, left subclavian artery, phrenic nerve, and vagus nerve).

70. Mediastinal tissue planes. Pathways of purulent process spreading in the mediastinum and the methods of its drainage.

71. Surgical anatomy of the lungs. Surgical approaches to the lungs and mediastinal organs.

72. Pneumonectomy, lung lobectomy, and lung segmentectomy: indications, technique.

73. Surgical anatomy of the pericardium. Pericardiocentesis: indications, technique.

74. Pericardiectomy: indications, technique.

75. Surgical anatomy of the heart. Surgical accesses to the heart.

76. Initial surgical debridement of chest traumas with cardiac injury.
77. Surgical treatment of patent ductus arteriosus.
78. Surgical treatment of aortic coarctation.
79. Mitral commissurotomy: indications, technique.
80. Modern methods of surgical treatment of coronary heart disease: coronary artery bypass surgery, mammary coronary artery anastomosis, coronary balloon angioplasty, periaortic plexectomy.
81. Surgical anatomy of the thoracic esophagus.
82. Surgical access to the thoracic esophagus.
83. Surgery for esophageal injuries. Esophagotomy. Esophageal resection. Esophageal suturing.
84. Cardiodiastasis (dilation of the cardiac part of the stomach): indications, technique.
85. Cardiectomy: indications, technique.
86. Fundoplication: indications, technique.
87. Modern options for esophageal replacement.
88. Surgical anatomy of the thoracic duct. Thoracic duct exposure: indications, technique.
89. Surgical anatomy of azygos vein, hemiazygos vein, thoracic sympathetic trunk, thoracic aorta.

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