

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

**Federal State Autonomous Educational Institution of Higher Education  
«National Research Lobachevsky State University of Nizhny Novgorod»**

Институт клинической медицины

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УТВЕРЖДЕНО

решением президиума Ученого совета ННГУ

протокол № 1 от 16.01.2024 г.

**Working programme of the discipline**

Topografic anatomy and operation surgery

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Higher education level

Specialist degree

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Area of study / speciality

31.05.01 - General Medicine

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Focus /specialization of the study programme

General Medicine

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Mode of study

full-time

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Nizhny Novgorod

Year of commencement of studies 2024

## 1. Место дисциплины в структуре ОПОП

Дисциплина Б1.О.32 Топографическая анатомия и оперативная хирургия относится к обязательной части образовательной программы.

## 2. Планируемые результаты обучения по дисциплине, соотнесенные с планируемыми результатами освоения образовательной программы (компетенциями и индикаторами достижения компетенций)

Формируемые компетенции (код, содержание компетенции)	Планируемые результаты обучения по дисциплине (модулю), в соответствии с индикатором достижения компетенции		Наименование оценочного средства	
	Индикатор достижения компетенции (код, содержание индикатора)	Результаты обучения по дисциплине	Для текущего контроля успеваемости	Для промежуточной аттестации
ОПК-5: Способен оценивать морфофункциональные, физиологические состояния и патологические процессы в организме человека для решения профессиональных задач	ОПК-5.1: Готов применить алгоритм клинико-лабораторной, инструментальной и функциональной диагностики при решении профессиональных задач ОПК-5.2: Оценивает морфофункциональные, физиологические состояния и патологические процессы в организме человека для интерпретации результатов клинико-лабораторной, инструментальной и функциональной диагностики при решении профессиональных задач ОПК-5.3: Знает принципы функционирования систем органов.	ОПК-5.1: Знает морфофункциональные, физиологические состояния и патологические процессы в организме человека для решения профессиональных задач  ОПК-5.2: Уметь оценивать морфофункциональные, физиологические состояния и патологические процессы в организме человека для решения профессиональных задач  ОПК-5.3: Владеть способностью оценки физического развития организма, данных диспансеризации различных контингентов и периодических медицинских осмотров для решения профессиональной задачи	Контрольная работа	Экзамен: Контрольные вопросы  Зачёт: Контрольные вопросы

## 3. Структура и содержание дисциплины

### 3.1 Трудоемкость дисциплины

	очная
Общая трудоемкость, з.е.	6

<b>Часов по учебному плану</b>	<b>216</b>
в том числе	
<b>аудиторные занятия (контактная работа):</b>	
- занятия лекционного типа	<b>26</b>
- занятия семинарского типа (практические занятия / лабораторные работы)	<b>72</b>
- КСР	<b>3</b>
<b>самостоятельная работа</b>	<b>79</b>
<b>Промежуточная аттестация</b>	<b>36</b> <b>Экзамен, Зачёт</b>

### 3.2. Содержание дисциплины

(структурированное по темам (разделам) с указанием отведенного на них количества академических часов и виды учебных занятий)

Наименование разделов и тем дисциплины	Всего (часы)	в том числе			
		Контактная работа (работа во взаимодействии с преподавателем), часы из них			Самостоятельная работа обучающегося, часы
		Занятия лекционного типа	Занятия семинарского типа (практические занятия/лабораторные работы), часы	Всего	
	о ф о	о ф о	о ф о	о ф о	о ф о
Общие вопросы оперативной хирургии и топографической анатомии.	33	12	12	24	9
Оперативная хирургия и топографическая анатомия верхних конечностей.	21		12	12	9
Оперативная хирургия и топографическая анатомия нижних конечностей.	21		12	12	9
Оперативная хирургия и топографическая анатомия головы.	15	2	4	6	9
Оперативная хирургия и топографическая анатомия шеи.	17	2	8	10	7
Оперативная хирургия и топографическая анатомия груди.	15	2	4	6	9
Оперативная хирургия и топографическая анатомия живота.	29	8	12	20	9
Оперативная хирургия и топографическая анатомия поясничной области и забрюшинного пространства.	13		4	4	9
Оперативная хирургия и топографическая анатомия малого таза и промежность.	13		4	4	9
Аттестация	36				
КСР	3				3
Итого	216	26	72	101	79

### Contents of sections and topics of the discipline

Общие вопросы оперативной хирургии: основные хирургические инструменты и правила пользования ими, шовный материал. Способы обезболивания и гемостаза; техника разъединения и соединения тканей, хирургические швы, узлы. Техника сосудистого шва по Каррелю. Топографо-анатомическое обоснование и техника шва нерва и сухожильного шва.

Топографическая анатомия и оперативная хирургия нижней конечности: топография ягодичной области, области бедра, колена, голени, голеностопного сустава и стопы. Клетчаточные пространства, каналы, межмышечные промежутки, сосудисто-нервные пучки, сосуды и нервы. Законы Пирогова о строении сосудистых влагалищ, футлярное строение фасциально-мышечной системы конечностей.

Операции: перевязка бедренной артерии в верхней трети бедра, техника грыжесечения при бедренных грыжах по Бассини, пункция тазобедренного сустава. Техника шва нерва и сухожилия; пункция коленного сустава.

Топографическая анатомия и оперативная хирургия верхних конечностей: надплечья (подмышечной, подключичной, дельтовидной и лопаточной областей), области плеча и локтевой области, плечевого и локтевого суставов, области предплечья, кисти и пальцев. Мышечно-фасциальные ложа и клетчаточные пространства, каналы и сосудисто-нервные пучки, лопаточный и локтевой артериальный анастомотический круги.

Операции: перевязка подмышечной и плечевой артерий, пункция плечевого сустава, венепункция, венесекция, катетеризация сосудов; обнажение срединного нерва в нижней трети предплечья, операции при воспалительных заболеваниях кисти и пальцев.

Топографическая анатомия головы: лобно-теменно-затылочная, височная, сосцевидная, щёчная, околоушно-жевательная, глубокая области лица. Операции: первичная хирургическая обработка ран головы, трепанация черепа.

Топографическая анатомия шеи: треугольники, фасции, клетчаточные пространства. Подподъязычная область, подчелюстной и сонный треугольники, грудино-ключично-сосцевидная область, наружный треугольник шеи. Сосудисто-нервные пучки медиального и латерального треугольников шеи. Шейные и плечевые сплетения, гортань, трахея, пищевод, щитовидная железа. Операции: вагосимпатическая блокада по Вишневскому, коникотомия, трахеостомия, перевязка наружной сонной артерии, резекция щитовидной железы, операции при флегмонах и абсцессах шеи.

Топографическая анатомия груди: слои грудной стенки, межрёберные промежутки, молочная железа, плевра, лёгкие, сердце, перикард, трахея, пищевод, грудная часть аорты, нижняя полая вена, грудной проток, симпатический и блуждающий нервы. Общий обзор топографии органов переднего и заднего средостений. Операции: пункция плевральной полости, пункция перикарда, торакотомия, ушивание раны при открытом пневмотораксе, операции при гнойном мастите, ушивание раны лёгкого, сердца.

Топографическая анатомия стенки живота: общая характеристика области и слои передней брюшной стенки, белая линия живота, пупок и пупочное кольцо, паховый канал, паховые и пупочные грыжи. Деление брюшной полости на этажи. Операции: грыжесечение при паховых и пупочных грыжах. Топографическая анатомия полости живота: производные брюшины в верхнем этаже брюшной полости, печень, желчный пузырь и внепечёночные желчные протоки, желудок, двенадцатиперстная кишка, поджелудочная железа и селезёнка. Операции: лапаротомия, ушивание прободной язвы желудка, холецистэктомия.

Топографическая анатомия нижнего этажа брюшной полости: Производные брюшины в нижнем этаже брюшной полости, тонкая и толстая кишки. Операции: резекция кишок, межкишечные анастомозы, аппендэктомия.

Топографическая анатомия поясничной области и забрюшинного пространства: отделы, глубокие фасции и слои забрюшинной клетчатки, почки, мочеточники, брюшная часть аорты, нижняя полая вена, поясничное сплетение. Операции: паранефральная блокада по Вишневскому, нефрэктомия.

Топографическая анатомия таза, промежности и срамной области: костно-связочная основа, мускулатура стенок и дна таза, диафрагма таза и мочеполая диафрагма, фасции и клетчаточные пространства, отношение брюшины к органам таза, этажи, сосуды и нервы, прямая кишка, мочевого пузырь, тазовые отделы мочеточников, матка с придатками, предстательная железа. Операции: пункция мочевого пузыря, цистостомия.

#### **4. Учебно-методическое обеспечение самостоятельной работы обучающихся**

Самостоятельная работа обучающихся включает в себя подготовку к контрольным вопросам и заданиям для текущего контроля и промежуточной аттестации по итогам освоения дисциплины приведенным в п. 5.

1. The anatomy of human skeletal muscles in tables : учебно-методическое пособие / Д. А. Данилова, А. В. Дерюгина, С. В. Копылова, Е. В. Крылова ; ННГУ им. Н. И. Лобачевского, Институт биологии и биомедицины, Кафедра физиологии и анатомии. - Нижний Новгород : Изд-во ННГУ, 2020. - 189 с. - Текст : электронный. <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=794262&idb=0>
2. Tsybusov S.N., Bulanov G.A., Garsiya A., Angel A.V. Topographical anatomy of the liver, gallbladder and bile ducts. Учебное пособие. Н.Новгород: Издательство ННГУ. 2022. 86 с.

#### **5. Assessment tools for ongoing monitoring of learning progress and interim certification in the discipline (module)**

##### **5.1 Model assignments required for assessment of learning outcomes during the ongoing monitoring of learning progress with the criteria for their assessment:**

##### **5.1.1 Model assignments (assessment tool - Control work) to assess the development of the competency ОПК-5:**

###### **SURGICAL INSTRUMENTS**

1. Find instruments from the list

Hegar needle holder

Kocher blunt retractor

Scissors for deep surgery

Hard intestinal clamp

Reverden plate

Explain what groups of surgical instruments are they from

2. Find instruments from the list

Kocher haemostatic forceps

Kornzang

Doyen ribs raspatory

Miculicz peritoneal clamp

Abdominal self retractor

Explain what groups of surgical instruments are they from

3. Find instruments from the list

1) Cooper scissors

2) Farabeuf retractor

3) Amputation knife

4) Fenestrated tongue holding forceps

5) Trachea sharp retractor

Explain what groups of surgical instruments are they from

4. Find instruments from the list

Cooper scissors

Kornzang

Miculicz peritoneal clamp

Soft intestinal clamp

Tracheostomic tube

Explain what groups of surgical instruments are they from

5. Find instruments from the list

Pointed scalpel

Kocher sharp retractor

Farabeuf raspatory

Luer bone cutting forceps

Liver retractor

Explain what groups of surgical instruments are they from

6. Find instruments from the list

Mosquito haemostatic forceps

Surgical pincers (forceps)

Luer bone cutting forceps

Miculicz peritoneal clamp

Trachea sharp retractor

Explain what groups of surgical instruments are they from

7. Find instruments from the list

Surgical pincers (forceps)

Kocher sharp retractor

Scissors for deep surgery

Wire saw

Male urethral catheter

Explain what groups of surgical instruments are they from

8. Find instruments from the list

Billroth haemostatic forceps

Grooved probe

Abdominal retractor

Payr stomach hand clamp

Abdominal self retractor

Explain what groups of surgical instruments are they from

9. Find instruments from the list

Mosquito haemostatic forceps

Ligature carrier

Liston bone cutting forceps

Miculicz peritoneal clamp

Rib spreader

Explain what groups of surgical instruments are they from

10. Find instruments from the list

General operating scalpel

Anatomical pincers

Liston bone cutting forceps

Tongue holding forceps

Liver retractor

Explain what groups of surgical instruments are they from

11. Find instruments from the list

Pointed scalpel

Farabeuf raspatory

Trocar

Hard intestinal clamp

Needle for bone puncture

Explain what groups of surgical instruments are they from

12. Find instruments from the list

Hegar needle holder

Grooved probe

Kocher soft intestinal clamp

Needle for bone puncture

Reverden plate

Explain what groups of surgical instruments are they from

13. Find instruments from the list

Surgical probe

Billroth haemostatic forceps

Hard intestinal clamp

Farabeuf raspatory

Male urethral catheter

Explain what groups of surgical instruments are they from

14. Find instruments from the list

Surgical probe

Billroth haemostatic forceps

Abdominal retractor

Tracheostomic tube

Liston bone cutting forceps

Explain what groups of surgical instruments are they from

15. Find instruments from the list

Kornzang

Hegar needle holder

Liston bone cutting forceps

Trachea sharp retractor

Abdominal self retractor

Explain what groups of surgical instruments are they from

16. Find instruments from the list



Farabeuf retractor

Ligature carrier

Luer bone cutting forceps

Male urethral catheter

Wire saw

Explain what groups of surgical instruments are they from

17. Find instruments from the list

General operating scalpel

Kocher haemostatic forceps

Amputation knife

Rib spreader

Trocar

Explain what groups of surgical instruments are they from

18. Find instruments from the list

Kocher haemostatic forceps

Farabeuf retractor

Needle for bone puncture

Reverden plate

Rib spreader

Explain what groups of surgical instruments are they from

19. Find instruments from the list

Anatomical pincers (forceps)

Kocher blunt retractor

Payr stomach hard clamp

Doyen ribs raspatory

Abdominal retractor

Explain what groups of surgical instruments are they from

20. Find instruments from the list

Grooved probe

Cooper scissors

Farabeuf raspatory

Liver retractor

Tracheostomic tube

Explain what groups of surgical instruments are they from

21. Find instruments from the list

Hegar needle holder

Kocher blunt retractor

Scissors for deep surgery

Hard intestinal clamp

Reverden plate

Explain what groups of surgical instruments are they from

## TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY OF UPPER LIMBS

1. Draw the scheme of horizontal section of axillary region at the level of the ostium of a. Subscapularis. Mark and write names of a. Axillaris and long branches of plexus Brachialis.
2. Draw the scheme of superiolateral part of the posterior wall of axillary cavity at the level of surgical neck of humeral bone (posterior view). Mark and write names of structures which form walls of foramen trilaterum and foramen quadrilaterum.
3. Draw the scheme of superiolateral part of the posterior wall of axillary cavity at the level of surgical neck of humeral bone (anterior view). Mark and write names of structures which form walls of foramen trilaterum and foramen quadrilaterum.
4. Explain what nerve can be traumatized when fracture of the humerus at the level of surgical neck of humeral bone had occurred. Demonstrate the clinical manifestation of this trauma of the nerve.
5. Draw the scheme of branching of a. Axillaris and write names of those branches. Add and write names for arteries which form arterial anastomoses with branches of a. Axillaris at the posterior wall of axillary cavity.
6. Draw the scheme of branching of a. Axillaris and write names of those branches. Add and write names for arteries which form arterial anastomoses with branches of a. Axillaris at the medial wall of axillary cavity.
7. Draw the scheme of branching of a. Axillaris and write names of those branches. Add and write names for arteries which form arterial anastomoses with branches of a. Axillaris at the anterior wall of axillary cavity.
8. Draw the scheme of horizontal section of axillary region at the level of the ostium of a. Subscapularis. Mark fat cell spaces of the anterolateral thoracic wall. Mark by arrows ways of pus spreading from the axillary cavity to the fat cell spaces of the anterolateral thoracic wall.
9. Draw the scheme of horizontal section of the arm at the level of the low third. Add and write names of a. Brachialis and its main branches.
10. Draw the scheme of horizontal section of the arm at the level of the up third. Add and write names of main nerves of the region.

11. Draw the scheme of horizontal section of the arm at the level of the middle third. Add and write names of main nerves of the region.
12. Draw the scheme of horizontal section of the arm at the level of the low third. Add and write names of main nerves of the region.
13. Explain what nerve can be traumatized when arterial tourniquet at the level of the middle third of the humerus was performed. Demonstrate the clinical manifestation of this trauma of the nerve.
14. Draw the scheme of the blood supply of the arm. Mark and write names of arteries which are main collaterals of the region.
15. Draw the scheme of horizontal section of the medial intermuscular space of the arm at the level of the middle third. Add and write names of main nerves of the region. Mark main neurovascular fascicles and write names of arteries and nerves which form them.
16. Draw the scheme of horizontal section of the humerus at the level of the epicondyles. Add and write names of main nerves and arteries which lay on the bone.
17. Draw the scheme of horizontal section of the anterior part of the forearm at the level of the middle third. Add and write names of muscles which form the region. Mark what muscles what nerves are innervated by.
18. Draw the scheme of the blood supply of the forearm. Mark and write names of arteries which are main collaterals of the region.
19. Draw the scheme of horizontal section of the forearm at the level of the middle third. Mark main neurovascular fascicles of the region and write names of arteries and nerves which form them.
20. Draw the scheme of horizontal section of the palmar part of the hand. Mark main neurovascular fascicles of the region and write names of arteries and nerves which form them.
21. Draw the scheme of horizontal section of the palmar part of the hand. Mark and write names of main fat cell spaces of the region.
22. Draw the scheme of horizontal section of the thenar. Mark and write names of muscles which form it. Mark what muscles what nerves are innervated by.
23. Draw the scheme of horizontal section of the hypothenar. Mark and write names of muscles which form it. Mark what muscles what nerves are innervated by.
24. Draw the scheme of skin innervation of palmar and dorsal surfaces of the hand. Mark surfaces and write names of nerves which are working there.

## TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY OF LOWER LIMB

1. Draw the scheme of foramen suprapiriformis (posterior view). Mark and write names of structures which form walls of it. Draw in the right order (from medial to lateral side) arteries and nerves which pass through it and write their names.
2. Draw the scheme of foramen infrapiriformis (posterior view). Mark and write names of structures which form walls of it. Draw in the right order (from medial to lateral side) arteries and nerves which pass through it and write their names.

3. Draw the scheme of the gluteal region (posterior view). Explain (draw arrows) in what directions the pus from gluteal phlegmons can spread out the region. Write names of spaces which can be contaminated.
4. Draw the scheme of the sagittal section through the internal femoral ring. Mark and write names of structures which form walls of the femoral canal. Draw the content of the canal and write names of structures which form it.
5. Draw the scheme of the anterior intermuscular space of the thigh. Mark and write names of structures which form walls of the space.
6. Draw schemes of horizontal section of the anterior intermuscular space of the thigh at three different levels (superior, medial and inferior thirds of the thigh). Draw (add to the scheme at the right position) and write names of the femoral artery, femoral vein and femoral nerve.
7. Draw the scheme of the structure of the adductors canal at the thigh (muscles which form rings and walls). Draw (add to the scheme) at the right position) and write names of the femoral artery, femoral vein and femoral nerve which pass through the canal.
8. Draw the scheme of the blood supply of the thigh. Mark and write names of a. Femoralis and its main branches. Add if need other arteries of the thigh which are main collaterals of the region.
9. Draw the scheme of the blood supply of the thigh. Draw by arrows additional ways of blood when the block of the blood flow because of thrombosis at the middle of the thigh occurred.
10. Draw the scheme of horizontal section at the medial level of fossa Poplitea (mark and write names of structures which form walls of the space). Draw the artery, vein and nerves at right places and write their names.
11. Draw the scheme of fossa Poplitea (posterior view). Mark and write names of structures which form walls of the space). Mark by arrows ways of pus spreading from the Popliteal fossa.
12. Draw the scheme of horizontal section at the upper third of the leg. Add canals at right position, mark and write names of arteries and nerves which pass through them.
13. Draw the scheme of blood supply of the leg. Mark and write names of the main artery of the region and its branches. Mark by arrows main collaterals of the region.
14. Draw the scheme of the horizontal section of the leg. Add and mark neurovascular fascicles at right positions. Write names of arteries and nerves which pass through concrete canals.
15. Draw the scheme of the horizontal section of the leg. Add and mark fat cell spaces at right positions. Draw by arrows ways of spreading of puss from the cruropopliteal canal and write names of contaminated spaces.
16. Draw the scheme of innervation of the skin of dorsal surface of the foot. Mark and write names of nerves which are working at the concrete part of skin.
17. Draw the scheme of blood supply of dorsal part of the foot. Mark and write names of arteries and their branches.
18. Draw the scheme of blood supply of plantar part of the foot. Mark and write names of arteries and their branches.

19. Draw the scheme of branching of n. Femoralis. Mark and write names of groups of muscles which are innervated by it. Demonstrate the clinical manifestation (what have to be the position of main joints of the limb) after trauma of the proximal part of the nerve.
20. Draw the scheme of branching of n. Tibialis. Mark and write names of groups of muscles which are innervated by it. Demonstrate the clinical manifestation (what have to be the position of main joints of the limb) after trauma of the proximal part of the nerve.
21. Draw the scheme of branching of n. Peroneus superficialis. Mark and write names of groups of muscles which are innervated by it. Demonstrate the clinical manifestation (what have to be the position of main joints of the limb) after trauma of the proximal part of the nerve.
22. Draw the scheme of branching of n. Peroneus profundus. Mark and write names of groups of muscles which are innervated by it. Demonstrate the clinical manifestation (what have to be the position of main joints of the limb) after trauma of the proximal part of the nerve.
23. Draw the scheme of branching of n. Obturatorius. Mark and write names of groups of muscles which are innervated by it. Demonstrate the clinical manifestation (what have to be the position of main joints of the limb) after trauma of the proximal part of the nerve.
24. Draw the scheme of branching of n. Ischiadicus. Mark and write names of groups of muscles which are innervated by it. Demonstrate the clinical manifestation (what have to be the position of main joints of the limb) after trauma of the proximal part of the nerve.

#### TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY OF HEAD AND NECK

1. Draw the scheme of frontal section of the scalp. Mark and write names of structures which form layers of the scalp. Mark by the arrow the level of disconnection of soft tissues in case of scalping wound.
2. Draw the scheme of medial sagittal section of the scalp. Mark and write names of structures which form layers of the scalp. Mark by the arrow the level of disconnection of soft tissues in case of scalping wound.
3. Draw the scheme of sagittal section of the scalp 5cm laterally than midline. Mark and write names of structures which form layers of the scalp. Mark and write names of spaces in which abscesses can occur.
4. Draw the scheme of frontal section of the scalp at the temporal region (the section have to pass through the midpoint of zygomatic arch. Mark and write names of structures which form layers of the region. Mark and write names of spaces in which phlegmons can occur.
5. Draw the scheme of sagittal section of the upper part of neurocranium 5cm laterally than midline. Mark and write names of tunics of the brain. Mark the space in which epidural hematoma can occur.
6. Draw the scheme of sagittal section of the upper part of neurocranium 5cm laterally than midline. Mark and write names of tunics of the brain. Mark the space in which subdural hematoma can occur.
7. Draw the scheme of sagittal section of the upper part of neurocranium 5cm laterally than midline. Mark and write names of tunics of the brain. Mark the space in which subarachnoid hemorrhage can occur.

8. Draw the scheme of the lateral view of head. Draw superficial nerves of the head at the right position, mark and write names of them.
9. Draw the scheme of the superior view of head. Draw projection of dural venous sinuses.
10. Draw the scheme of the lateral view of head. Draw projection superficial arteries, mark and write names of them. Mark points in which we can easy arrest bleeding from them by finger compression.
11. Draw the scheme of the anterior view of head. Draw skin branches of trigeminal nerve. Mark points in which we can easy block them by local anesthetic injection.
12. Explain what hematoma was formed, if you have founded blood in liquor during lumbal punction. Draw the scheme of brain tunics, mark and write names of them and mark the hematoma by arrow at the right position.
13. Draw the scheme of the anterior view of the head. Draw the projection of paranasal sinuses. Mark and write names of them. Write names of diseases accompanied by inflammation of each of sinuses.
14. Draw the scheme of the anterior view of the face. Draw, mark and write the name of traumatized nerve when skin sensitivity of the face was lost.
15. Draw the scheme of the anterior view of the face. Draw, mark and write the name of traumatized nerve when mimetic muscles function at the face was lost.
16. Draw the scheme of lateral view of the neck. Draw and write the name of the muscle which divides the neck on anterior and lateral parts.
17. Draw the scheme of anterior view of the neck. Draw and write the name of the main neurovascular fascicle of the medial part of the neck. Write names of structures which form the fascicle.
18. Draw the scheme of lateral view of the neck. Draw, mark and write names of muscles which limit the carotid triangle.
19. Draw the scheme of lateral view of the neck. Draw, mark and write names of structures which limit the submandibular triangle.
20. Draw the scheme of anterior view of the neck. Draw main arteries of the region and branches of them. Marc and write names of vessels on the scheme.
21. Draw the scheme of lateral view of the neck. Draw and write the name of the neurovascular fascicle of the lateral part of the neck. Write names of structures which form the fascicle.
22. Draw the scheme of the neck (anterior view). Draw the scheme of the blood supply of the neck on it. Draw the projection of the thyroid gland on the scheme and explain using arrows how it is blood supplied.
23. Draw the scheme of the neck and upper part of thorax (anterior view). Draw the arch of aorta, right and left a. Carotica communis and right and left n. Vagus. Draw in right manner right and left n. Laringeus reccurens.
24. Draw the scheme of the anterior view of the neck. Draw main muscles on the scheme. Draw the projection of a. Carotica communis.

1. Draw the abdominal wall (anterior view). Add projections of internal abdominal organs mark and write names of them.
2. Draw the abdominal wall (anterior view). Add projections of main arteries of the region, mark and write names of them. Explain by arrows arterial anastomoses of the anterior abdominal wall.
3. Draw the abdominal wall (anterior view). Add projections of main veins of the region, mark and write names of them. Explain by arrows cava-caval and porta-caval anastomoses of the anterior abdominal wall.
4. Draw the abdominal wall (anterior view). Add projections of internal end external inguinal rings, mark and write names of them. Mark by crests the position of the hernia sack in case of inguinal direct hernia and inguinal indirect hernia, write names of them.
5. Draw the abdominal wall (anterior view). Add projections of internal end external femoral rings, mark and write names of them. Mark by crest the position of the hernia sack.
6. Draw the abdominal wall (anterior view). Add places, in which hernias can occur, mark them by crests and write names of them.
7. Draw the scheme of sagittal section through the internal inguinal ring. Mark and write names of structures, which form the anterior, posterior, superior and inferior walls or the inguinal canal. Add the normal content of the canal and write the name of the organ which for it. Draw and mark the position of the hernia sack of the indirect inguinal hernia.
8. Draw the scheme of oblique horizontal section of the abdominal wall 3cm upper and parallel to the inguinal ligament. Marc and write names of structures, which form the anterior and posterior walls or the inguinal canal. Add the normal content of the canal and write the name of the organ which for it. Draw and mark the position of the hernia sack of the direct inguinal hernia.
9. Draw the scheme of peritoneal cavity (anterior view). Draw internal organs and write names of them. Mark the superior and inferior floors of the peritoneal cavity, mark and write the name of the organ which disconnects them.
10. Draw the scheme (anterior view) of the liver and near lying organs. Draw ligaments which connect them, mark and write names of those ligaments.
11. Draw the scheme (anterior view) of the stomach and near lying organs. Draw ligaments which connect them, mark and write names of those ligaments.
12. Draw the scheme (anterior view) of the stomach and near lying organs. Draw, mark and write names of arteries which supply the stomach.
13. Draw the scheme (anterior view) of the pancreas and near lying organs. Draw, mark and write names of arteries which supply the pancreas. Explain (by arrows) the origin of those arteries.
14. Draw the scheme of the medial sagittal section of the superior floor of peritoneal cavity. Draw main internal organs, mark and write names of them. Draw parietal peritoneum, mark and write the name of structures covered by it.
15. Draw the scheme of the medial sagittal section of the superior floor of peritoneal cavity. Draw visceral peritoneum covering main internal organs, mark and write the name of those internal organs.

16. Draw the scheme of the medial sagittal section of the superior floor of peritoneal cavity. Draw ligaments which connect internal organs. Mark and write the name of them.
17. Draw the scheme (anterior view) of the Omentum minor and Omentum major and near lying organs. Mark ligaments which form them and write names of those ligaments.
18. Draw the scheme of anterior aspect of the liver. Add extrahepatic part of biliary system, mark bile ducts which form it and write names of them.
19. Draw the scheme of the sagittal section of the Foramen Epiploicum. Mark and write names of organs which form the anterior, posterior, superior and inferior walls of the hole.
20. Draw the scheme of peritoneal cavity (anterior view). Draw internal organs of the inferior floor of the cavity, mark and write names of them.
21. Draw the scheme of blood supply of organs of peritoneal cavity, mark and write names of main arteries and their big branches.
22. Draw the scheme of the inferior floor of peritoneal cavity (anterior view). Draw, mark and write names of main compartments of it.
23. Draw the scheme of large intestine (anterior view), mark and write names of parts which form it. Draw the vascular tree of arteries which supply the colon.
24. Draw the scheme of the vascular system of the liver. Add the portal system, mark and write names of main branches which form it. Explain by arrows in what direction the blood can flow in case of portal hypertension.
25. Draw the scheme of peritoneal cavity (anterior view). Draw internal organs on their position, mark and write names of them. Explain by arrows through what compartments (mark and write names of them) of peritoneal cavity the spreading of the content can occur in case of the perforation of appendix.

#### Assessment criteria (assessment tool — Control work)

Grade	Assessment criteria
pass	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько негрубых ошибок.
fail	Уровень знаний ниже минимальных требований. Имели место грубые ошибки.

#### 5.2. Description of scales for assessing learning outcomes in the discipline during interim certification

##### Шкала оценивания сформированности компетенций

Уровень сформированности компетенций (индикатора достижения)	плохо	неудовлетворительно	удовлетворительно	хорошо	очень хорошо	отлично	превосходно
	не зачтено		зачтено				



ения компет							
<u>Знания</u>	Отсутствие знаний теоретического материала. Невозможность оценить полноту знаний вследствие отказа обучающегося от ответа	Уровень знаний ниже минимальных требований. Имели место грубые ошибки	Минимально допустимый уровень знаний. Допущено много негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько несущественных ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Ошибок нет.	Уровень знаний в объеме, превышающем программу подготовки.
<u>Умения</u>	Отсутствие минимальных умений. Невозможность оценить наличие умений вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы основные умения. Имели место грубые ошибки	Продemonстрированы основные умения. Решены типовые задачи с негрубыми ошибками. Выполнены все задания, но не в полном объеме	Продemonстрированы все основные умения. Решены все основные задачи с негрубыми ошибками. Выполнены все задания в полном объеме, но некоторые с недочетами	Продemonстрированы все основные умения. Решены все основные задачи. Выполнены все задания в полном объеме, но некоторые с недочетами.	Продemonстрированы все основные умения. Решены все основные задачи с отдельными несущественными недочетами, выполнены все задания в полном объеме	Продemonстрированы все основные умения. Решены все основные задачи. Выполнены все задания, в полном объеме без недочетов
<u>Навыки</u>	Отсутствие базовых навыков. Невозможность оценить наличие навыков вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы базовые навыки. Имели место грубые ошибки	Имеется минимальный набор навыков для решения стандартных задач с некоторыми недочетами	Продemonстрированы базовые навыки при решении стандартных задач с некоторыми недочетами	Продemonстрированы базовые навыки при решении стандартных задач без ошибок и недочетов	Продemonстрированы навыки при решении нестандартных задач без ошибок и недочетов	Продemonстрирован творческий подход к решению нестандартных задач

### Scale of assessment for interim certification

Grade		Assessment criteria
pass	<b>outstanding</b>	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme.
	<b>excellent</b>	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
	<b>very good</b>	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
	<b>good</b>	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",

	<b>satisfactory</b>	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level.
	<b>unsatisfactory</b>	At least one competency has been developed at the "unsatisfactory" level.
<b>fail</b>	<b>poor</b>	At least one competency has been developed at the "poor" level.

### **5.3 Model control assignments or other materials required to assess learning outcomes during the interim certification with the criteria for their assessment:**

#### **5.3.1 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-5**

##### **TOPOGRAPHIC ANATOMY OF LIMBS**

1. The topology: definition, study methods, terms (planes, limits, landmarks).
2. The topology of the axillary region.
3. The topology of the scapular region. Arterial anastomoses of the region.
4. The topology of the axillary artery.
5. The topology of anterior part of the arm.
6. The topology of posterior part of the arm.
7. The topology of neurovascular bundles of anterior part of the arm.
8. The topology of the median nerve.
9. The topology of the ulnar nerve.
10. The topology of the radial nerve.
11. The topology of the musculo-cutaneous nerve.
12. Ways of spreading of pus in case of the purulent inflammation in the axillary region.
13. The topology of anterior part of elbow region. Arterial anastomosis of the elbow region.
14. The topology of neurovascular bundles of the elbow region.
15. Ways of spreading of pus in case of purulent arthritis of the elbow joint.
16. The topology of anterior part of the forearm.
17. The topology of dorsal part of the forearm.

18. The topology of palm of the hand.
19. Ways of spreading of pus in cases of the purulent inflammation of the palm.
20. The topology of the gluteal region.
21. The topology of anteromedial part of the thigh.
22. The topology of posterior part of the thigh.
23. The topology of canals of the thigh.
24. The topology of the sciatic nerve.
25. The topology of the deep femoral artery.
26. The topology of posterior part of the knee region.
27. The topology of neurovascular bundles of posterior part of the knee region.
28. Ways of spreading of pus in case of purulent gonitis.
29. The topology of anterior part of the leg.
30. The topology of posterior part of the leg.
31. The topology of canals of the leg.
32. Connections of fat spaces of the leg with fat spaces of near lying regions.
33. The topology of dorsal part of the foot.
34. The topology of plantar part of the foot.

#### TOPOGRAPHIC ANATOMY OF THE BODY

1. The topology of vessels and nerves of the scalp.
2. The topology of frontal-parietal-occipital region of the head.
3. The topology of the temporal region.
4. The topology of brain tunics. The topology of the middle meningeal artery.
5. The topology of the facial region of head (general description).
6. The topology of the parotido-masseteric region.
7. The topology of the infrahyoid region and trachea in the neck.

8. The topology of the submandibular triangle.
9. Fascias of the neck.
10. Fat cell spaces of the neck.
11. The topology of carotid triangle in the neck.
12. The topology of medial main neurovascular bundles of the neck.
13. The topology of lateral main neurovascular bundles of the neck.
14. The topology of the sternocleidomastoid region.
15. The topology of the thyroid gland.
16. The topology of the thoracic wall. The topology of the mamma gland.
17. The topology of lungs.
18. The topology of the pericardium.
19. The topology of the heart.
20. The topology of the esophagus.
21. The topology of the thoracic aorta.
22. The topology of the anterolateral abdominal wall: general description, regions of abdominal wall, projection of organs on abdominal wall.
23. Features of topology of anterior abdominal wall in case of the inguinal hernia.
24. The topology of the inguinal canal.
25. The topology of the superior part of peritoneal cavity: compartments, subdiaphragmatic spaces, lesser omentum.
26. The topology of the liver. Couinaud classification of hepatic segments.
27. The topology of the omental and the hepatic sacks.
28. The topology of the gall-bladder, the cystic duct and the common bile duct. The cystohepatic triangle (Calot's triangle).
29. The topology of the stomach.
30. The topology of the duodenum.
31. Variants of the pancreaticobiliary ductal union.

32. The topology of the pancreas.
33. The topology of small and large intestine.
34. Variants of relations of appendix to the caecum and to the peritoneum.
35. Ways of spreading of content in case of appendix rupture and topology of appendicular abscesses.
36. The topology of kidneys and urethres.
37. The topology of the pelvis: interrelation of peritoneum and pelvic organs, floors of pelvic cavity, pelvic diaphragm and urogenital diaphragm.
38. Fat cellular spaces of the pelvis.
39. The topology of the rectum.
40. The topology of the urinary bladder.
41. The topology of the male urethra.
42. The topology of the perineum.

#### OPERATIVE SURGERY OF LIMBS AND BODY

1. Operative surgery: definition, conditions for performing operations, stages of operations.
2. Operation in cases of mastitis and panaricium.
3. Kinds of osteosynthesis.
4. Osteosynthesis: definition, classification. The technique of intramedullar osteosynthesis of thigh.
5. The classification and technique of surgical approach to vessels.
6. Arthroplasty. Endoprosthesis.
7. Dermatoplasty: classification, methods and technique of dermatoplasty.
8. General principles of amputations and exarticulations of extremities: stages, demands to the stump.
9. Particularities of amputations of extremities in cases of vascular disorders. Methods of definition of a level of amputation.
10. Technique and stages of the primary surgical treatment of wounds.
11. Surgical approaches to long tubular bones of extremities.
12. General conception of the wound: definition, constitutive elements, classification.

13. Ligation of axillary artery.
14. Suture of blood vessels: classification, stages. Suture of artery by Carrel.
15. Ligation of femoral artery in the upper third of thigh.
16. Surgical approach to large peripheral nerves. Suture of the nerve (stages).
17. Surgical approach to large articulations.
18. Main principles of vascular suture.
19. Suture of tendons: demands, classification, methods (Lange, Cuneo, Kazakov).
20. Trepanation of skull. Primary surgical treatment of wounds of head. Incisions on the face.
21. Resection of thyroid gland. Incisions for abscesses of the neck.
22. Vagosympathetical blockade by Wishnevsky. Ligation of external carotid artery.
22. Tracheostomy. Operations in cases of neck phlegmons.
23. Pleural puncture. Suture of open pneumothorax.
24. Suture of wounds of heart.
25. Hernioplasty of inguinal hernia by Martynov and Bassini.
26. Hernioplasty of inguinal hernia by Spasokukotsky and Kimbarovsky.
27. Stages of herniotomy.
28. Particularity of herniotomy in cases of the strangulated inguinal and femoral hernias.
29. Abdominal hernias: definition, classification, ethiology, parts.
30. Operations in case of femoral hernia.
31. Technique of upper medial laparotomy. Gastrotomy.
32. Resection of stomach by Billroth 1, Billroth 2.
33. Laparotomy: definition, classification. Technique of superior medial laparotomy.
34. Operations in case of perforated ulcer of stomach.
35. Cholecystectomy.
36. Resection of small intestine with enteroanastomosis "side-to-side".
37. Resection of small intestine with the enteroanastomosis "end-to-end".

38. Gastrostomy: definition, methods, technique.
39. Gastroenterostomy: definition, classification. Technique of anterior antecolic gastroenterostomy.
40. Technique of the posterior retrocolic gastroenterostomy.
41. Appendectomy.
42. Exploring abdominal cavity and organs of the abdomen.
43. Operations in cases of wounds of the intestine.
44. Operations in case of acute intestinal impassability.
45. Intestinal suture: definition, classification, demands, steps.
46. Technique of forming anus preternaturalis.
47. Resection of the liver: classification, methods of hemostasis, technique of atypical resections of the liver.
48. Suture of wounds of the liver.
49. Operations in case of abscess of the liver.
50. Nephrectomy. Resection of the kidney, suture of the kidney.
51. Surgical treatment of wounds and strictures of the urethra.

#### **Assessment criteria (assessment tool — Control questions)**

Grade	Assessment criteria
outstanding	Высокий уровень подготовки, безупречное владение теоретическим материалом, студент демонстрирует творческий подход к решению нестандартных ситуаций. Студент дал полный и развернутый ответ на все теоретические вопросы билета, подтверждая теоретический материал практическими примерами. Студент активно работал на практических занятиях. 100% выполнение контрольных экзаменационных заданий.
excellent	Высокий уровень подготовки с незначительными ошибками. Студент дал полный и развернутый ответ на все теоретические вопросы билета, подтверждает теоретический материал практическими примерами. Студент активно работал на практических занятиях. Выполнение контрольных экзаменационных заданий на 90% и выше.
very good	Хорошая подготовка. Студент дает ответ на все теоретические вопросы билета, но имеются неточности в определениях понятий, процессов и т.п. Студент активно работал на практических занятиях. Выполнение контрольных экзаменационных заданий от 80 до 90%.
good	В целом хорошая подготовка с заметными ошибками или недочетами. Студент дает полный ответ на все теоретические вопросы билета, но имеются неточности в

Grade	Assessment criteria
	определениях понятий, процессов и т.п. Допускаются ошибки при ответах на дополнительные и уточняющие вопросы экзаменатора. Студент работал на практических занятиях. Выполнение контрольных экзаменационных заданий от 70 до 80%.
satisfactory	Минимально достаточный уровень подготовки. Студент показывает минимальный уровень теоретических знаний, делает существенные ошибки, но при ответах на наводящие вопросы, может правильно сориентироваться и в общих чертах дать правильный ответ. Студент посещал практические занятия. Выполнение контрольных экзаменационных заданий от 50 до 70%.
unsatisfactory	Подготовка недостаточная и требует дополнительного изучения материала. Студент дает ошибочные ответы, как на теоретические вопросы билета, так и на наводящие и дополнительные вопросы экзаменатора. Студент пропустил большую часть практических занятий. Выполнение контрольных экзаменационных заданий до 50%.
poor	Подготовка абсолютно недостаточная. Студент не отвечает на поставленные вопросы. Студент отсутствовал на большинстве лекций и практических занятий. Выполнение контрольных экзаменационных заданий менее 20 %.

### 5.3.2 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-5

Test ticket №1

I.

Find instruments from the list

- 1) Hegar needle holder
- 2) Kocher blunt retractor
- 3) Scissors for deep surgery
- 4) Hard intestinal clamp
- 5) Reverden plate

Explain what groups of surgical instruments are they from

II.

- 1) Tie the Granny knot by hands on the two-colored thick thread.
- 2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №2



I.

Find instruments from the list

Kocher haemostatic forceps

Kornzang

Doyen ribs raspatory

Miculicz peritoneal clamp

Abdominal self retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Square knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №3

I.

Find instruments from the list

1) Cooper scissors

2) Farabeuf retractor

3) Amputation knife

4) Fenestrated tongue holding forceps

5) Trachea sharp retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Surgical knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

Test ticket №4

I.

Find instruments from the list

Cooper scissors

Kornzang

Miculicz peritoneal clamp

Soft intestinal clamp

Tracheostomic tube

Explain what groups of surgical instruments are they from

II.

1) Tie the Granny knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №5

I.

Find instruments from the list

Pointed scalpel

Kocher sharp retractor

Farabeuf raspatory

Luer bone cutting forceps

Liver retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Square knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №6

I.

Find instruments from the list

Mosquito haemostatic forceps

Surgical pincers (forceps)

Luer bone cutting forceps

Miculicz peritoneal clamp

Trachea sharp retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Surgical knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

Test ticket №7

I.

Find instruments from the list

Surgical pincers (forceps)

Kocher sharp retractor

Scissors for deep surgery

Wire saw

Male urethral catheter

Explain what groups of surgical instruments are they from

II.

1) Tie the Granny knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №8

I.

Find instruments from the list

Billroth haemostatic forceps

Grooved probe

Abdominal retractor

Payr stomach hand clamp

Abdominal self retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Square knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №9

I.

Find instruments from the list

Mosquito haemostatic forceps

Ligature carrier

Liston bone cutting forceps

Miculicz peritoneal clamp

Rib spreader

Explain what groups of surgical instruments are they from

II.

1) Tie the Surgical knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

Test ticket №10

I.

Find instruments from the list

General operating scalpel

Anatomical pincers

Liston bone cutting forceps

Tongue holding forceps

Liver retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Granny knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №11

I.

Find instruments from the list

Pointed scalpel

Farabeuf raspatory

Trocar

Hard intestinal clamp

Needle for bone puncture

Explain what groups of surgical instruments are they from

II.

- 1) Tie the Square knot by hands on the two-colored thick thread.
- 2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №12

I.

Find instruments from the list

Hegar needle holder

Grooved probe

Kocher soft intestinal clamp

Needle for bone puncture

Reverden plate

Explain what groups of surgical instruments are they from

II.

- 1) Tie the Surgical knot by hands on the two-colored thick thread.
- 2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

Test ticket №13

I.

Find instruments from the list

Surgical probe

Billroth haemostatic forceps

Hard intestinal clamp

Farabeuf raspatory

Male urethral catheter

Explain what groups of surgical instruments are they from

II.

- 1) Tie the Granny knot by hands on the two-colored thick thread.
- 2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №14

I.

Find instruments from the list

Surgical probe

Billroth haemostatic forceps

Abdominal retractor

Tracheostomic tube

Liston bone cutting forceps

Explain what groups of surgical instruments are they from

II.

1) Tie the Square knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №15

I.

Find instruments from the list

Kornzang

Hegar needle holder

Liston bone cutting forceps

Trachea sharp retractor

Abdominal self retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Surgical knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

Test ticket №16

I.

Find instruments from the list

Farabeuf retractor

Ligature carrier

Luer bone cutting forceps

Male urethral catheter

Wire saw

Explain what groups of surgical instruments are they from

II.

1) Tie the Granny knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №17

I.

Find instruments from the list

General operating scalpel

Kocher haemostatic forceps

Amputation knife

Rib spreader

Trocar

Explain what groups of surgical instruments are they from

II.

1) Tie the Square knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №18

I.

Find instruments from the list

Kocher haemostatic forceps

Farabeuf retractor

Needle for bone puncture

Reverden plate

Rib spreader

Explain what groups of surgical instruments are they from

II.

1) Tie the Surgical knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

Test ticket №19

I.

Find instruments from the list

Anatomical pincers (forceps)

Kocher blunt retractor

Payr stomach hard clamp

Doyen ribs raspatory

Abdominal retractor

Explain what groups of surgical instruments are they from

II.

1) Tie the Granny knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Interrupted suture? Sew three stitches of Simple Interrupted suture on this tissue and fixate all of them by Granny knots. At least one of knots you have to tie by instruments.

Test ticket №20

I.

Find instruments from the list

Grooved probe

Cooper scissors

Farabeuf raspatory

Liver retractor

Tracheostomic tube

Explain what groups of surgical instruments are they from

II.

1) Tie the Square knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Mattress Interrupted suture? Sew three stitches of Mattress Interrupted suture on this tissue and fixate all of them by Square knots. At least one of knots you have to tie by instruments.

Test ticket №21

I.



Find instruments from the list

Hegar needle holder

Kocher blunt retractor

Scissors for deep surgery

Hard intestinal clamp

Reverden plate

Explain what groups of surgical instruments are they from

II.

1) Tie the Surgical knot by hands on the two-colored thick thread.

2) Imagine You are performing the step of surgical operation. What tissue can be sutured by the Simple Continuous suture? Sew three stitches of Simple Continuous suture on this tissue and fixate all of them by Surgical knots. At least one of knots you have to tie by instruments.

#### **Assessment criteria (assessment tool — Control questions)**

Grade	Assessment criteria
pass	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько негрубых ошибок.
fail	Уровень знаний ниже минимальных требований. Имели место грубые ошибки.

#### **6. Учебно-методическое и информационное обеспечение дисциплины (модуля)**

Основная литература:

1. Nikolaev A.V. Topographic Anatomy and Operative Surgery : учебник / Nikolaev A.V. - Москва : ГЭОТАР-Медиа, 2021. - 672 с. - ISBN ISBN 978-5-9704-6095-5.,  
<https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=773553&idb=0>.

Дополнительная литература:

1. Dydykin. Operative surgery and topographic anatomy. Practical surgical skills for students of years II-IV of medical universities and faculties program. Part I. Surgical instruments : учебное пособие / Dydykin. - Москва : ГЭОТАР-Медиа, 2023. - 64 с. - ISBN 978-5-9704-7625-3.,  
<https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=870563&idb=0>.

2. Dydykin. Operative surgery and topographic anatomy. Practical surgical skills for students of years II-IV of medical universities and faculties program. Part II. Main elements of operational technique : учебное пособие / Dydykin. - Москва : ГЭОТАР-Медиа, 2023. - 56 с. - ISBN 978-5-9704-7626-0.,  
<https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=870564&idb=0>.

Программное обеспечение и Интернет-ресурсы (в соответствии с содержанием дисциплины):

ЭБС «Юрайт». Режим доступа: <http://biblio-online.ru>.

ЭБС «Консультант студента». Режим доступа: <http://www.studentlibrary.ru>.

ЭБС «Лань». Режим доступа: <http://e.lanbook.com/>.

ЭБС «Znaniium.com». Режим доступа: [www.znaniium.com](http://www.znaniium.com).

## **7. Материально-техническое обеспечение дисциплины (модуля)**

Учебные аудитории для проведения учебных занятий, предусмотренных образовательной программой, оснащены мультимедийным оборудованием (проектор, экран), техническими средствами обучения.

Помещения для самостоятельной работы обучающихся оснащены компьютерной техникой с возможностью подключения к сети "Интернет" и обеспечены доступом в электронную информационно-образовательную среду.

Программа составлена в соответствии с требованиями ФГОС ВО по направлению подготовки/специальности 31.05.01 - General Medicine.

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