МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ КЫРГЫЗСКОЙ РЕСПУБЛИКИ
УЧРЕЖДЕНИЕ «САЛЫМБЕКОВ УНИВЕРСИТЕТ»

МЕЖДУНАРОДНЫЙ ФАКУЛЬТЕТ МЕДИЦИНЫ
Кафедра Естественно-гуманитарных дисциплин

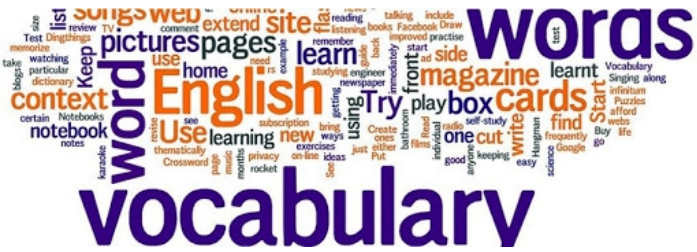
СОГЛАСОВАНО
Заведующий кафедрой
Естетсвенно-гуманитарных
дисциплин
_____Касымалиева К.К.
«_____» _____20____г.

УТВЕРЖДЕНО
Ректор Учреждения
«Салымбеков Университет»
_____Жумадилов Э.Ж.
«____» _____20____г.

Учебно-методический комплекс дисциплины

АНГЛИЙСКИЙ ЯЗЫК

основной образовательной программы по направлению подготовки (специальности) «Лечебное дело»



Составитель (и): к.п.н., ст. преподаватель Абдыбекова Н.А.

Бишкек

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ КЫРГЫЗСКОЙ РЕСПУБЛИКИ
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МЕЖДУНАРОДНЫЙ ФАКУЛЬТЕТ МЕДИЦИНЫ

Факультет *Лечебный*

Кафедра *Естественно-гуманитарных дисциплин*

Название дисциплины «Иностранный язык (английский язык)»

Учебно-методический комплекс дисциплины «Иностранный язык» (английский язык)

Название и код направления подготовки *«Лечебное дело»*

Квалификация выпускника *Врач общей практики*

Форма обучения *очная*

Составитель(и): к.п.н., ст. преподаватель Абдыбекова Н.А.

Рабочая программа рассмотрена и одобрена
на заседании УМС
Учреждения «Салымбеков Университет»
№_____ от_____20_____

Рабочая программа рассмотрена и одобрена
на заседании кафедры Естественно-гуманитарных дисциплин
Учреждения «Салымбеков Университет»
№_____ от_____20_____

зав. УМО
Акматова А.Т. _____

Заведующий кафедрой ЕГД
Касымалиева К.К. _____

Составитель
ст. преподаватель Абдыбекова Н.А. _____

ОГЛАВЛЕНИЕ

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ КЫРГЫЗСКОЙ РЕСПУБЛИКИ
УЧРЕЖДЕНИЕ «САЛЫМБЕКОВ УНИВЕРСИТЕТ»
МЕЖДУНАРОДНЫЙ ФАКУЛЬТЕТ МЕДИЦИНЫ

Кафедра *Естественно-гуманитарных дисциплин*

РАБОЧАЯ ПРОГРАММА

по дисциплине ««**Иностранный язык (английский язык)»**
для студентов специальности «Лечебное дело»

Дневной формы обучения

Курс _____1_____

Семестр _____1_____

Зачет (семестр) _____

Экзамен (семестр)_____

Всего часов по учебному плану 60 _____

Из них:

- Лекции_____
- Лабораторные _____
- Практические_____30 _____
- Курсовая работа _____
- Контрольная работа _____
- Самостоятельная работа___30_____

Рабочая программа составлена в соответствии с требованиями Государственного образовательного стандарта по специальности «Лечебное дело»

Рабочая программа разработана: **ст. преподаватель Абдыбекова Н.А.**

Рассмотрена и утверждена на заседании кафедры *Естественно-гуманитарных дисциплин*
Протокол №_____ от «_____» _____20_____г.

Согласовано с Учебно-методическим советом Учреждения «Салымбеков Университет»

Протокол №_____ от «_____» _____20___г. _____
(подпись председ. УМС)

Заведующий кафедрой _____ _____
(уч. степень, должность) (подпись)

Бишкек

АННОТАЦИЯ

Дисциплина «Иностранный язык (английский язык)» является обязательной общегуманитарной дисциплиной для специальности «Лечебное дело» высшего профессионального медицинского образования.

Дисциплина «Иностранный язык (английский язык)» разработан в соответствии Государственным стандартом и включает программу учебной дисциплины, тексты, рекомендуемую литературу, словарь терминов, задания для выполнения контрольных работ, тестовые задания.

Главной *целью дисциплины* является формирование у студентов медиков основных умений использования английского языка в качестве средства информационной деятельности и профессионального общения. Предусматривается развитие у студентов навыков и умений чтения, аудирования и говорения на английском языке на материале лексики и грамматических структур с использованием медицинских терминов.

Обучение устному профессиональному общению. Устная речь как комплексная учебная деятельность рассматривается в аспектах аудирования и говорения. Процесс обучения устной речи подразумевает выполнение системы учебных речевых действий от элементарного высказывания до участия в беседе, устного профессионального общения. Обучение английскому языку в вузе представляет собой самостоятельный и законченный курс, имеющий свое содержание и структуру. В то время как средняя школа закладывает основы владения английским языком, вузы осуществляют профессионально-ориентированное обучение будущих специалистов. Отсюда вытекают особенности отбора языкового и речевого материала и его организации в учебно-методических комплексах для групп вузов основных специальностей. С позиции системного подхода рассматриваются взаимодействие, дифференциация и соотношение видов речевой деятельности на разных этапах обучения; ситуативно-ролевая обусловленность учебного речевого общения и учебной деятельности; соотношение двух речевых систем – родного и иностранного языков характеристика учебного материала.

Данная программа разработана для студентов-медиков, изучающих английский язык. Программа рассчитана на один учебный семестр и предназначена для студентов 1 курса первого семестра. При составлении рабочей программы учитывался принцип «студентоцентрированное и личностно-орентированное обучение», поэтому материалы должны удовлетворить потребности студентов и способствовать повышению их мотивации и развитию творческого подхода к изучению.

ОБЩИЕ ПОЛОЖЕНИЯ

1.1. МИССИЯ И СТРАТЕГИЯ

Миссия Учреждения «Салымбеков Университет» является формирование в Кыргызской Республике универсальной платформы в виде современного высшего учебного заведения, осуществляющего свою деятельность в сфере качественного предоставления образовательных услуг по высоким международным стандартам. Приоритетной задачей нашего Университета является экспорт образовательных услуг и качественная подготовка высококвалифицированных кадров, обладающих всеми знаниями и навыками специалистов по различным направлениям. Кроме этого наша миссия заключается в предоставлении знаний, навыков и практики в лучших традициях системы образования Великобритании, Соединённых Штатов, а также ведущих стран Европы и Азии. Согласно с Миссией и Стратегией «Салымбеков Университет» основной целью является формирование педагогических условий формирования навыков речевой деятельности студентов медиков на занятиях английского языка.

Университет преследует цель раскрыть весь огромный потенциал мультиязычной системы образования, когда на ряду с государственными и официальными языками студенты и учащиеся во время учебных процессов успешно осваивают английский язык. Полученные в нашем Университете современные знания и навыки в сочетании со свободным владением международного языка повышает конкурентную способность наших выпускников как на внутреннем, так и на внешнем рынке труда, а также позволяет им успешно осуществлять свою трудовую деятельность в любой англоговорящей стране.

1.2. ЦЕЛИ И ЗАДАЧИ ДИСЦИПЛИНЫ:

Главной целью является формирование у студентов медиков основных умений использования английского языка в качестве средства информационной деятельности и профессионального общения. Предусматривается развитие у студентов навыков и умений чтения, аудирования и говорения на английском языке на материале лексики и грамматических структур.

Цель **вводного курса** - коррекция, систематизация и совершенствование знаний, умений и навыков, полученных в средней школе, на материале специальной лексики и базовых грамматических структур. Особое внимание уделяется интернациональным словам и лексике латинского и греческого происхождения. Цель **основного курса** - выработка базовых умений и навыков, необходимых для использования английского

языка как средства получения информации по специальности и профессионального общения.

ЗАДАЧИ ДИСЦИПЛИНЫ. Учебно-методический комплекс «Иностранный язык (английский язык)» ставит задачу помочь студенту методически правильно и эффективно организовать изучение дисциплины и выполнить контрольную работу.

1.3. МЕСТО ДИСЦИПЛИНЫ В СТРУКТУРЕ ОСНОВНОЙ ОБРАЗОВАТЕЛЬНОЙ ПРОГРАММ

Учебная дисциплина «Английский язык» относится к гуманитарному циклу дисциплин по специальности «Лечебное дело» высшего профессионального медицинского образования.

Дисциплина «Английский язык» позволяет обучение устному профессиональному общению**.** Устная речь как комплексная учебная деятельность рассматривается в аспектах аудирования и говорения. Процесс обучения устной речи подразумевает выполнение системы учебных речевых действий от элементарного высказывания до участия в беседе, устного профессионального общения.

1.4. ФОРМИРУЕМЫЕ КОМПЕТЕНЦИИ, А ТАКЖЕ ПЕРЕЧЕНЬ ПЛАНИРУЕМЫХ РЕЗУЛЬТАТОВ ОБУЧЕНИЯ ПО ДИСЦИПЛИНЕ (ЗНАНИЯ, УМЕНИЯ ВЛАДЕНИЯ), СФОРМУЛИРОВАННЫЕ В КОМПЕТЕНТНОСТНОМ ФОРМАТЕ

Программа по дисциплине «Английский язык» составлена в соответствии с требованиями Государственного образовательного стандарта по специальности «Лечебное дело», что обеспечивает подготовку специалистов высшей профессиональной квалификации, соответствующей современным требованиям Кыргызской Республики.

1.5. ТРЕБОВАНИЯ К УРОВНЮ ПОДГОТОВКИ СТУДЕНТА, ЗАВЕРШИВШЕГО ПРОГРАММУ ИЗУЧЕНИЯ ДАННОЙ ДИСЦИПЛИНЫ НА ПЕРВОМ КУРСЕ

В результате изучения учебной дисциплины обучающиеся должны:

Изучение данной учебной дисциплины направлено на формирование у обучающихся следующих общекультурных (ОК) и профессиональных (ПК) компетенций:

1.5.1. Компетенции, формируемые в результате освоения дисциплины:

а) ***универсальные:***

- ***общенаучные (ОК)***

- обладает навыками социокультурной и межкультурной коммуникации, обеспечивающими адекватность социальных и профессиональных контактов (ОК-1);

- осознанием значения гуманистических ценностей для сохранения и развития современной цивилизации; готовностью принять нравственные обязательства по отношению к окружающей природе, обществу и культурному наследию (ОК-2);

- знает свои права и обязанности как гражданина своей страны; умеет использовать действующее законодательство; демонстрирует готовность и стремление к совершенствованию и развитию общества на принципах гуманизма, свободы и демократии (ОК-3).

- инструментальные (ИК)

- владеет наследием отечественной научной мысли, направленной на решение общегуманитарных и общечеловеческих задач (ИК-1);

- владеет культурой мышления, способностью к анализу, обобщению информации, постановке целей и выбору путей их достижения, владеет культурой устной и письменной речи (ИК-2);

- понимает социальную значимость своей будущей профессии, обладает высокой мотивацией к выполнению профессиональной деятельности (ИК-4);

- готовность работать с информацией из различных источников (ИК-7).

- социально-личностные и общекультурные (СЛК)

- ориентируется в системе общечеловеческих ценностей и учитывает ценностно-смысловые ориентации различных социальных, национальных, религиозных, профессиональных общностей и групп в обществе (СЛК-1);

- способностью занимать гражданскую позицию в социально-личностных конфликтных ситуациях (СЛК-4);

- стремится к постоянному саморазвитию, повышению своей квалификации и мастерства; может критически оценить свои достоинства и недостатки, наметить пути и выбрать средства саморазвития (СЛК-5).

*б) **профессиональные (ПК)**:*

- владеет системой лингвистических знаний, включающей в себя знание основных фонетических, лексических, грамматических, словообразовательных явлений и закономерностей функционирования изучаемого иностранного языка, его функциональных разновидностей (ПК-1);

- имеет представление об этических и нравственных нормах поведения, принятых в инокультурном социуме, о моделях социальных ситуаций, типичных сценариях взаимодействия (ПК-2);

- владеет основными способами выражения семантической, коммуникативной и структурной преемственности между частями высказывания - композиционными

элементами текста (введение, основная часть, заключение), сверхфразовыми единствами, предложениями (ПК-4);

- обладает готовностью преодолевать влияние стереотипов и осуществлять межкультурный диалог в общей и профессиональной сферах общения (ПК-7);

- умеет использовать этикетные формулы в устной и письменной коммуникации (приветствие, прощание, поздравление, извинение, просьба) (ПК-8);

- владеет методикой подготовки к выполнению перевода, включая поиск информации в справочной, специальной литературе и компьютерных сетях (ПК-10);

- знает основные способы достижения эквивалентности в переводе и умеет применять основные приемы перевода (ПК-11);

- умеет осуществлять письменный перевод с соблюдением норм лексической эквивалентности, соблюдением грамматических, синтаксических и стилистических норм (ПК-12);

- умеет оформлять текст перевода в компьютерном текстовом редакторе (ПК-13);

- способен оценивать качество и содержание информации, выделять наиболее существенные факты и концепции, давать им собственную оценку и интерпретацию (ПК-15);

- способен осуществлять реферирование и аннотирование письменных текстов (ПК-16);

- способен быстро переключаться с одного рабочего языка на другой (ПК-17);

- способен воспринимать на слух аутентичную речь в естественном для носителей языка темпе, независимо от особенностей произношения и канала речи (от живого голоса до аудио- и видеозаписи) (ПК-18);

- владеет основами системы сокращенной переводческой записи при выполнении устного последовательного перевода (ПК-20);

- умеет моделировать возможные ситуации общения между представителями различных культур и социумов (ПК-24);

- имеет навыки работы с компьютером как средством получения, обработки и управления информацией (ПК-29);

- умеет работать с электронными словарями и другими электронными ресурсами для решения лингвистических задач (ПК-32).

К концу обучения студенты должны уметь выполнять различные виды занятий над литературой по специальности и овладеть следующими речевыми навыками и умениями:

1. Понимать содержание и извлечение информации из прочитанного источника.
2. Уметь делать перевод из прочитанного источника.

3. Знать весь пройденный материал.
4. Уметь делать высказывание по теме.

В результате изучения студенты должны
ЗНАТЬ:
- основные фонологические, лексические, грамматические явления и закономерности изучаемого языка как системы.
-литературную норму изучаемого языка: орфоэпическую, орфографическую, лексическую, грамматическую и стилистическую;

ЗНАТЬ И УМЕТЬ применять в коммуникативной и профессиональной деятельности:
- языковые характеристики видов дискуссий -(устный и письменный дискурс, подготовленную и неподготовленную речь, официальную и неофициальную речь);
- основные речевые формы высказывания (повествование, описание, рассуждение, монолог, диалог);
- дискурсивные способы выражения актуальной информации в иноязычном тексте;
- прагматические параметры высказывания (адаптация к предмету ситуации, типу адресата, условиям ситуации, интенции автора);
- интерпретацию (языковую, культурологическую) художественного и газетно-публицистического текстов.

БЫТЬ ОЗНАКОМЛЕННЫМИ:
- с особенностями функционирования единиц родного (I-го иностранного) и изучаемого языков в плане их сходства и различия

Практические цели и задачи курса конкретизируются в требованиях к коммуникативным умениям говорения, аудирования, чтения и письма во всех видах речевой деятельности, связанной с восприятием и порождением дискурса, интеракцией (диалогическое общение) и медиацией (перевод, интерпретация).

2. СОДЕРЖАНИЕ И ТРУДОЁМКОСТЬ ДИСЦИПЛИН

2.1. СТРУКТУРА ДИСЦИПЛИНЫ

№	СТРУКТУРНЫЕ ЭЛЕМЕНТЫ
1	**ВЫПИСКА ИЗ ГОС ВПО**
2	**РАБОЧАЯ ПРОГРАММА**
	Аннотация или краткое описание дисциплины:
	1. Актуальность и необходимость изучения дисциплины
	2. Наименование тем
	3. Цель и задачи дисциплины
	4. Место дисциплины в учебном процессе, т.е. связь данной дисциплины с другими дисциплинами
	5. Что должен знать и уметь студент после окончания изучения данной дисциплины
	Тематический план
	Аннотация или краткое описание дисциплины:
	1. MEDICINE IN ANCIENT CIVILIZATION
	2. THE HIPPOCRATIC OATH
	3. STUDYING THE HUMAN BODY
	4. THE REBIRTH OF SCIENCE
	5. THE SCELETON
	6. THE MUSCLES
	7. THE CARDIOVASCULAR SYSTEM
	8. THE RESPIRATORY SYSTEM
	9. THE DIGESTIVE SYSTEM
	10. ABDOMAN
	11. THE URINATY SYSTEM

	12. THE KIDNEYS
	13. BLOOD. CIRCULATION
	14. LEUCOCYTES AND LYMPHOCYTES
	15. NATURE OF THE HEART BEAT
	THE SECOND TERM
	1. RESPIRATION
	2. .DIGESTION
	3. NUTRITION
	4. THE EXCRETORY ORGANS
	5. THE ENDOCRINE SYSTEM
	6. THE NERVOUS SYSTEM
	7. VIRUSES.BACTERIA
	8. OSTEOMYELITIS.FRACTURES
	9. HYPOPHYSIS
	10. THE BRAIN AND NERVES
	11. CLASSIFICATION OF SENSE
	12. VIRUSES
	13. WHAT ARE BACTERIA?
	14. ACUTE OSTEOMYELITIS
	15. FRACTURES
2	**УЧЕБНО-МЕТОДИЧЕСКИЕ МАТЕРИАЛЫ**
	Практикум
	1. MEDICINE IN ANCIENT CIVILIZATION
	Ключевые понятия (глоссарий)

	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	2. THE HIPPOCRATIC OATH
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	3. STUDYING THE HUMAN BODY
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	4. THE REBIRTH OF SCIENCE.
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля

	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	5. THE SKELETON.
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	6. THE MUSCLES
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	7. THE CARDIOVASCULAR SYSTEM
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения

	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	8. THE RESPIRATORY SYSTEM
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	9. THE DIGESTIVE SYSTEM
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	10. ABDOMAN
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература

	Тема докладов и рефератов
	11. THE URINARY SYSTEM
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	12. THE KIDNEYS
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	13. BLOOD. CIRCULATION.
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	14. LEUCOCYTES AND LYMPHOCYTES
	Ключевые понятия (глоссарий)

	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	15. NATURE OF THE HEART BEAT
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	1. RESPIRATION
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	2. DIGESTION
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля

	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	3.NUTRITION
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	4. THE EXCRETORY ORGANS
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	5. THE ENDOCRINE SYSTEM
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература

	Тема докладов и рефератов
	6. THE NERVOUS SYSTEM
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	7. VIRUSES.BACTERIA.
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	8. OSTEOMYELITIS
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	9. THE HYPOPHYSIS

	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	10. BRAIN AND NERVES
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	11. CLASSIFICATION OF SENSES
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	12. VIRUSES
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы

	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	13. WHAT ARE BACTERIA.
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов

	14. ACUTE OSREOMYELITIS
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля
	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература
	Тема докладов и рефератов
	15. FRACTURES
	Ключевые понятия (глоссарий)
	Методические указания и рекомендации по проведению семинарского занятия: ролевые игры, схемы, таблицы
	Вопросы для самоконтроля

	Учебные задания
	Вопросы, задачи, упражнения
	Тестовые вопросы
	Литература

ОБЪЕМ ДИСЦИПЛИНЫ И ВИДЫ УЧЕБНОЙ РАБОТЫ

Вид работы	Трудоемкость, часы
	1 семестр
Практические занятия	30
Семинары	
Лабораторные работы	
Самостоятельная работа	30
Контрольные работы	
Всего	60
Вид итогового контроля	Диф.зачет

2.2. ТЕМАТИЧЕСКИЙ ПЛАН ПО МОДУЛЯМ

	The first term			
№	**Theme**	**Content**	**Practical classes**	**Competencies**
1	Medicine in Ancient Civilization	Чтение гласных букв в ударном и безударном положении. спряжение глаголов to be, to have	2	Пк-11
2	The Hippocratic Oath	Согласные звуки в английском языке	2	Пк-4
3	Studing the Human Body	Чтение сочетаний английских гласных и согласных букв. Артикли.	2	Пк-12
4	The Rebirth of Science. Rapid Scientific Advances	Порядок слов в английских утвердительных и вопросительных предложениях. Четыре типа вопросов	2	Пк-3

5	The Skeleton	Оборот there is/are. Основные формы глагола to be. Времена группы Indefinite (Active Voice).	2	Пк-4
6	The Muscles	Времена группы Continuous (Active Voice). Модальные глаголы can, must, may. Функции и перевод слова that (those).	2	Пк-8
7	The Cardiovascular System	Времена группы Perfect (Active Voice). Степени сравнения прилагательных. Функции и перевод слов because, because of.	2	Пк-11
8	The Respiratory System	Времена группы Indefinite, Continuous, Perfect (Passive Voice).Функции и перевод слова one (ones). Существительные в функции определения.	2	Пк-8
9	The Digestive System	Неопределенные местоимения some, any, no. Дополнительные, определительные и обстоятельственные придаточные предложения.	2	Пк-4
10	Abdoman	Функции и перевод местоимения it. Суффиксы -ic,-ical, -al, -ive, -ous.	2	Пк-8
11	The Urinary System	Эквиваленты модальных глаголов. Употребление глагола в настоящем времени в значении будущего. Функциии перевод слов since, as.	2	Пк-1
12	The Kidneys	Суффиксы -ment,-en. Значение слов certain,cause,to regard.	2	Пк-2
13	Blood. Circulation	Причастия I и II в функции определения. Согласование времен.	2	Пк-20
14	leucocytes and lymphocytes.	Функции и перевод слов after, before.	2	Пк-20

15	Nature of the heart beat.The cardiac output.	Согласование времен.	2	Пк-2
		Total	30	
	The second term			
1	Respiration	Причастия I и II в функции обстоятельства. Независимый причастный оборот. Функции и перевод слов both, both… and.	2	Пк-20
2	Digestion	Инфинитив в функции подлежащего и обстоятельства. Сравнительная конструкция the...due, due to.	2	Пк-4
3	Nutrition	Инфинитив в функции определения. Бессоюзные придаточные предложения. Функции и перевод слова for.	2	Пк-11
4	The Excretory Organs	Сложное подлежащее. Функциии перевод слов as well as, as well	2	Пк-15
5	The Endocrine System	Сложное дополнение. Составные союзы either...or.	2	Пк-8
6	The Nervous System	Герундий,ing-формы в раличных функциях.	2	Пк-11
7	Viruses. Bacteria	Условные предложения. Различные функции глаголов shall, will,should, would.	2	Пк-15
8	Osteomyelitis. Fractures	Повторение: временагруппыIndefinite (Active and Passive Voice).	2	Пк-1
9	Hypophysis(the pituitary)	Повторение: временагруппыPerfect (Active and Passive Voice).	2	Пк-8
10	The brain and nerves.	Повторение: временагруппыContinuous (Active	2	Пк-4

		and Passive Voice).		
11	Classification of the sense	Повторение: модальные глаголы can, may, must и их эквиваленты	2	Пк-8
12	Viruses	Повторение: функции причастий	2	Пк-11
13	What are bacteria?	Повторение: ing-формы	2	Пк-11
14	Acute Osteomyelitis	Повторение: функции инфинитива	2	Пк-8
15	Fractures	Повторение: виды придаточных предложений.	2	Пк-11
		total	**30**	
		Total hours for academic year	**60**	

2.3. СОДЕРЖАНИЕ ПРАКТИЧЕСКИХ ЗАНЯТИЙ

№	ТЕМА	Содержания	План урока	Дом задания	часы
1	Medicine in Ancient Civilization	Чтение гласных букв в ударном и безударном положении. спряжение глаголов to be, to have	1.using of to be, to have 2.explaining of international works. 3.discussing about early medicine.	Ex.4,8,9,10,11 p.13.14.15.16.17.	2
2	The Hippocratic Oath	Согласные звуки в английском языке	1.correct pronouncing of vowels, consonants 2. work with a text.	Ex12,13,14,15 p.23.24.	2
3	Studing the Human Body	Чтение сочетаний английских гласных и согласных букв. Артикли.	1.correct reading of words 2.discussing	Ex.13.14 p.30.31.32.	2

			the proverbs 3.discussing the text.		
4	The Rebirth of Science. Rapid Scientific Advances	Порядок слов в английских утвердительных и вопросительных предложениях. Четыре типа вопросов	1.rules of questions 2.correct translation of text. 3.ways of retelling	Ex10.11.12,13, 14 P.41.42	2
5	The Skeleton	Оборот there is/are. Основные формы глагола to be. Времена группы Indefinite (Active Voice).	1.how to use new grammar 2.explaining of tense 3.structure of skeleton in English	Ex11,12,13,17, 24 p.47.49.51.53	2
6	The Muscles	Времена группы Continuous (Active Voice). Модальные глаголы can, must, may. Функции и перевод слова that (those).	1.how to use new grammar 2.types of muscle in English	Ex.7.8.9.11.12. 14.1523.25 p.56.57.60.61.	2
7	The Cardiovascular System	Времена группы Perfect (Active Voice). Степени сравнения прилагательных. Функции и перевод слов because, because of.	1. how to use new grammar. 2. explaining of suffixes 3.correct translation of words.	Ex. 19,20,21.3 p.69.70	2
8	The Respiratory System	Времена группы Indefinite, Continuous, Perfect (Passive Voice).Функции и	1.how to use new grammar. 2.explaining of respiratory	Ex. 14.23.24.25.6 p.78.79.81	2

		перевод слова one (ones). Существительные в функции определения.	system correct translation		
9	The Digestive System	Неопределенные местоимения some, any, no. Дополнительные, определительные и обстоятельственные придаточные предложения.	1.how to use new grammar 2.text translation and discussing	Ex. 11.12.19.3.5. p.87.88.89.90.	2
10	Abdoman	Функции и перевод местоимения it. Суффиксы -ic,-ical, -al, -ive, -ous.	1.using of suffixes 2.structure and position of abdomen 3.discussing the new theme	Ex. 8.9.10.11.18 p.86.87.88.	2
11	The Urinary System	Эквиваленты модальных глаголов. Употребление глагола в настоящем времени в значении будущего. Функциии перевод слов since, as.	1.using of new grammar 2.adding of suffixes 3.text translation	Ex. 16.17.18.19.20. p.94.95.96.97	2
12	The Kidneys	Суффиксы -ment,-en. Значение слов certain,cause,to regard.	1.Using of suffixes 2.text translation and discussing	Ex3.4.5. New words of 7 structure	2
13	Blood. Circulation	Причастия I и II в функции определения. Согласование времен.	1.How to use new grammar 2.what’s the blood	Ex.9.10.14.13.15.16.p. 102.103.104.	2

			circulation		
14	leucocytes and lymphocytes.	Функции и перевод слов after, before.	1.meaning of new words. 2. how to use the words 3. Text translation	Ex. 9.10.11.12.13.14.15, p. 105-106	2
15	Nature of the heart beat.The cardiac output.	Согласование времен.	1.How to use new grammar 2.text translation	Ex 1.2.3.p.109-108	2
	Итого		30		
№	**ТЕМА**	**ГРАММАТИКА**	**Дом задания**	**часы**	
1	Respiration	Причастия I и II в функции обстоятельства. Независимый причастный оборот. Функции и перевод слов both, both… and.	1,how to use grammar 2.new words of respiration	Ex2.3.p115	2
2	Digestion	Инфинитив в функции подлежащего и обстоятельства. Сравнительная конструкция the...due, due to.	1.how to use grammar Translation of new structure	Ex 6.7.12 p, 123-124	2
3	Nutrition	Инфинитив в функции определения. Бессоюзные придаточные предложения. Функции и перевод слова for.	1.how to use new grammare 2. working with the text	Ex12,13,3.p. 129-132	2
4	The Excretory Organs	Сложное подлежащее. Функциии перевод	1.using the grammar	Ex.10.14.1.2.3. p140.141.142.1	2

		слов as well as, as well	2.discussing the new theme	43.	
5	The Endocrine System	Сложное дополнение. Составные союзы either...or.	1 using the grammar in exercises 2.analyzing the new them	Ex.5.6.7.8. p.146-147	2
6	The Nervous System	Герундий,ing-формы в различных функциях.	1.How to use new grammar 2.working with new words.	Ex.1.2.3.4. p.156.157.	2
7	Viruses. Bacteria	Условные предложения. Различные функции глаголов shall, will,should, would.	1.using new grammar in exercises 2. discussing the new theme	Ex.6.7.8.9.p. 160-163.	2
8	Osteomyelitis. Fractures	Повторение: времена группыIndefinite (Active and Passive Voice).	1.work with exercises 2revision of grammar 3.analyzing the theme	Ex. 6.7.8.9. p.170-171.	2
9	The Hypophysis	Повторение: времена группыPerfect (Active and Passive Voice).	1.revision of the grammar 2.work with exercises 3 right translation of the text	Ex.2.4.5.p.180-181	2
10	The brain and nerves	Повторение: времена группыContinuous (Active and Passive Voice).	1.revision of the grammar 2. analyzing the theme	Ex.1.2.3. p 185-186.	2
11	Classification	Повторение:	1.Revision of	Ex.6.7.8.9.190-	2

	of the senses	модальные глаголы can, may, must и их эквиваленты	the grammar 2.Discussing about the theme	191	
12	Viruses	Повторение: функции причастий	1.revision of the grammar 2. talking about diseases	Ex.8..9.10 p. 198-199	2
13	What are bacteria?	Повторение: ing-формы	12.Revision of 2the gra2mmar 2.making the free topic	Ex.1.2.3.p206	2
14	How to write science article?	Особенности написания научной статьи	1.revision of the grammar 2. making up topic about the theme	Presentation	4
	ИТОГО		**30**		

3. ПЕРЕЧЕНЬ УЧЕБНО-МЕТОДИЧЕСКОГО ОБЕСПЕЧЕНИЯ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ ОБУЧАЮЩИХСЯ

№	Тема заданий для СРС	Виды работ	Час	Методическое обеспечение	Форма отчет.	Кол-во часов
I семестр						
1	The heart	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
2	Heart diseases	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
3	First aid	презентация		Рекомендуемая литература,	Защита	2

				интернет ресурсы		
4	bleeding	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
5	**fracture**	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
6	**at the doctor's**	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
7	**The patients need you help**	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
8	Headache	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
9	Pneumonia	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
10	Bronchitis	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
11	Rickets	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
12	A case from the practical medicine	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
13	A case report	презентация	2	Рекомендуемая литература, интернет ресурсы	Защита	2
14	Science article	презентация	4	Рекомендуемая литература, интернет	Защита	4

				ресурсы		
					Всего	**30**

4.ФОНД ОЦЕНОЧНЫХ СРЕДСТВ ДЛЯ ТЕКУЩЕГО, РУБЕЖНОГО И ИТОГОВОГО КОНТРОЛЕЙ ПО ИТОГАМ ОСВОЕНИЯ ОБУЧАЮЩИХСЯ

4.1. Перечень компетенций с указанием этапов их формирования в процессе освоения дисциплины

№	Наименование раздела	Формируемые компетенции (указывается код компетенции)	Информационные и образовательные технологии
1	Context and Word Structure How Is Medical Terminology Constructed?	ОК-1, ОК-2, ИК-4	Опрос. Доклады студентов. Дискуссия.
2	Medical Language for the Body Medical Terminology for Organ Systems. Medical Language for the Body Medical Terminology for Positions Anatomical Terms for Planes of the Body	ОК-2, ОК-1 ИК-7	Опрос. Ситуационные и практические задачи
3	The Language of Blood and Bleeding	ОК-1, ОК-2 ИК-4	Вводное тестирование. Беседа. Дискуссия.
4	Physical assessment. Assessment and the Muscular System	ОК-2, ОК-1 ИК-4	Собеседование, Конспект и устные опросы.
5	Physical assessment. Pregnancy Assessment		Опрос. Беседа
6	Neurological Emergency.	ОК-3, ОК-3 ИК-4	Опрос. Доклады студентов. Дискуссия.
7	Respiratory System. Anatomy and Physiology: Respiratory System	ОК-1, ОК-2 ИК-4	Опрос. Ситуационные

	Pathophysiology of the Respiratory System		и практические задачи
8	Putting all together. Exercises for revision and self-control.	ОК-1, ОК-2 ИК-4	Беседа. Дискуссия.
9	**1 module**	***Тестирование***	
10	Skeletal System Naming Bones.	ОК-1, ОК-2	Опрос. Доклады студентов. Дискуссия.
11	Cardiovascular System	ИК-4	Опрос. Ситуационные и практические задачи
12	Male Reproductive System.	ОК-1, ОК-2	Беседа. Дискуссия.
13	Urinary System.	ИК-4	Опрос. Доклады студентов. Дискуссия.
14	Endocrine System. Exocrine System.	ОК-1, ОК-2	Опрос. Ситуационные и практические задачи
15	**2 module**	**Тестирование**	

4.2. МЕТОДИЧЕСКИЕ МАТЕРИАЛЫ, ОПРЕДЕЛЯЮЩИЕ ПРОЦЕДУРЫ ОЦЕНИВАНИЯ ЗНАНИЙ, УМЕНИЙ, НАВЫКОВ И (ИЛИ) ОПЫТА ДЕЯТЕЛЬНОСТИ

Основой модульного обучения является структурирование содержания учебной дисциплины на модули. Изучаемая дисциплина состоит из набора модулей. Объем учебного материала модуля раскрывает отдельную тему изучаемой дисциплины или несколько тем (раздел дисциплины). Учебная дисциплина разбивается на 2-3 модуля в семестре.

По каждому модулю устанавливается перечень обязательных видов работы студента, включающий: посещение лекционных, практических (лабораторных) занятий; ответы на теоретические вопросы, решение практических задач и выполнение заданий на практическом занятии; выполнение лабораторных работ; выполнение контрольных работ; тестирование по теме (группе тем); другие виды работ, определяемые преподавателем.

Каждый дисциплинарный модуль должен завершаться определённой формой контроля для оценки степени усвоения учебного материала и получения рейтинговой оценки качества усвоения учебного материала.

Кредиты присваиваются каждой дисциплине, входящей в учебный план кроме дисциплины «Физическая культура», которые не рассчитываются в кредитах.

Учебные достижения - результаты обучения студентов оцениваются по 100-балльной шкале, соотносятся с пятибалльной системой, и могут соотносится с системой ECTS **(табл.1)**. Итоговая модульно-рейтинговая оценка по дисциплине выставляется по результатам двух модулей и итогового контроля знаний.

Распределение баллов рейтинговой оценки между видами контроля устанавливается в следующем соотношении:

Форма промежуточной аттестации	**Количество баллов**			
	Текущий контроль	**Рубежный контроль**	**Итоговый контроль**	**Сумма баллов**
Экзамен	40	40	20	100
Дифференцированный зачет	40	40	20	100

Таблица 1

Рейтинговая оценка (%)	**5-ти балльная оценка**	**Оценка ECTS**	**Определение ECTS**
85-100	5 – отлично	A	Отличный результат с минимальными ошибками
81-84	4 – хорошо	B	Вышесредний результат с некоторыми ошибками
70-80		C	Средний результат с заметными ошибками
60-69	3 – удовлетворительно	D	Слабый результат со значительными недостатками
55-59		E	Посредственный результат
0-54	2 – неудовлетворительно	F	Необходимо пересдать весь пройденный материал

Основной деятельностью студентов является самостоятельная работа. Самостоятельная работа студента (СРС) состоит из двух частей:

- первая часть включает самостоятельную работу с участием преподавателя (СРП).
- вторая часть основана на выполнение индивидуальной самостоятельной работы (ИСР).

Следовательно, **СРС = СРП + ИСР**.

Задание на СРС студенты должны получить в начале семестра.

Итоговая оценка знаний студентов слагается из трех составляющих:

- текущий контроль (ТК);
- рубежный контроль (РК), т.е. результатов модульной работы;
- самостоятельной работы студента (СРС).

Следовательно, **ИК = ТК + РК + СРС**

Определение рейтинга студента по дисциплинам

Рейтинг - индивидуальный аккумулятивный (накопительный) индекс студента. Суммарная рейтинговая оценка по дисциплине формируется из рейтинговой оценки текущей работы по модулям (текущий и рубежный контроль) и рейтинговой оценки итогового контроля.

Рейтинг является активным показателем, заставляющим студента стремиться к его повышению. Студент своевременно информируется об изменении своего рейтинга, что является главным фактором активизации его самостоятельной работы.

Рейтинговая система оценки успеваемости студентов позволяет повысить мотивацию в учебной деятельности путем более четкой дифференциации оценки учебной работы каждого студента, уменьшить влияние субъективных факторов со стороны преподавателя при итоговом контроле знаний, расширить формы и методы работы в ходе изучения дисциплины, что способствует повышению эффективности ее усвоения.

Определение общего рейтинга студентов

- *Рейтингом студента по дисциплине* является полученный итоговый балл:

РД = итоговый балл студента по дисциплинам.

- *Рейтинг студента за семестр* рассчитывается как средневзвешенный рейтинг студента по всем рейтингам по дисциплине

$$\boldsymbol{P} = \frac{\boldsymbol{\Sigma}\,\text{РД}}{\boldsymbol{N}}$$

где, *РД* – рейтинг студента по дисциплинам, *N* – количество изучаемых дисциплин в семестре. Рейтинг студентов определяется в каждом семестре по результатам зачетно- экзаменационной сессии.

5. КОНТРОЛЬНЫЕ ЗАДАНИЯ ИЛИ ИНЫЕ МАТЕРИАЛЫ, НЕОБХОДИМЫЕ ДЛЯ ОЦЕНКИ ЗНАНИЙ, УМЕНИЙ, НАВЫКОВ И (ИЛИ) ОПЫТА ДЕЯТЕЛЬНОСТИ

ТЕСТОВЫЕ ВОПРОСЫ

Module 1

circle the appropriate answer. Circle a, b, c, or d.

1. The respiratory system _____ oxygen to all body cells.
a. intimates b. removes c. supplies d. prohibits

2. Carbon dioxide is produced in the _____.
a. lungs b. blood stream c. heart d. cells

3. The respiratory system _____ accumulation of carbon dioxide in body tissues.
a. increases b. decreases c. ensures d. hinders

4. The primary function of the respiratory system is _____.
a. exhaling carbon dioxide b. inhaling oxygen
c. both a & b d. neither a nor b

5. Toxic substances and disease-causing organisms come from _____.
a. the blood b. the air c. the cells d. the lungs

6. Oxygen moves into the cells _____ its movement into the blood stream.
a. after b. before c. simultaneously d. prior to

7. Carbon dioxide is produced in the _____.
lungs
blood stream
heart

cells

8. Oxygenation of blood occurs in the _____.

a. Heart b. blood stream c. lungs d. cells

9. The bronchioles are _____ (than) the bronchi.

a. bigger b. of the same size of c. smaller d. same as

10. The blue jacket costs $50, the white jacket costs $70. The blue jacket is …… than the white one.

- cheaper
- cheap
- less cheaper

11. What is the medical terminology?

A) The descriptions of terms used in psycology

B) It includes all of the specialized vocabulary that medical professionals use to identify human anatomy (structures) and physiology (functions), as well as words that indicate location, direction, planes of the body, medical status, and instructions for administering medication.

C) Sport terminology for students in the field of physical education

D) medical terminology is an account of the origins and the developments in the meaning of a word or term.

12. Etymology is

A) etymology brings us into contact with the psychology of human ideas that determine human destiny and mortality

B) Etymology is difficult medical language in easy-to-understand explanations

C) The history of a word is called its etymology.

D) etymology is a branch of science

13. **Suffifixes are …**

A) Suffixes are word parts that are added to the end of a root word to change its meaning or its part of speech. The English word suffix is derived from a Latin word that means to attach one thing to the end or below another thing.
B) Suffixes expand the meaning of prefixes
C) Suffixes are descriptive, and they expand the meaning of antonyms
D) Suffixes are descriptive, and they expand the meaning of a synonyms

14. **Antonyms** are …
A) words that are opposite in meaning, such as good and bad or happy and sad. Many antonyms are created by adding a prefix to a root word.
B) words that are different in meaning, such as good and bad or happy and sad. Many antonyms are created by adding a prefix to a root word.
C) Words that are opposite and same in meaning, such as good and bad or happy and sad. Many antonyms are created by adding a prefix to a root word.
D) Words or phrase that means exactly or nearly the same as another word or phrase in the same language.

15. **Prefixes are ….**
A) Prefixes are descriptive, and they expand the meaning of a root word. They sit at the beginning of words. Although they cannot generally stand alone as a complete word, they do have meaning.
B) Prefixes expand the meaning of prefixes
C) Prefixes are descriptive, and they expand the meaning of antonyms
D) Prefixes are descriptive, and they expand the meaning of a synonyms

16. **Root** words are
A) **Root** words are word parts that can stand alone as words on their own. You can expand a root word and change its meaning by adding a prefix before the word or a suffix after the word.
B) Words that are **synonyms** are said to be synonymous
C) Words begin, start, commence, and initiate are all **synonyms** of one another.
D) **A word** or phrase that means exactly or nearly the same as **another** lexeme in the same language.

17. **Write the new words with following prefixes hyper- pre- a-**

A) hyperglycemia; high blood sugar levels; preoperative; occurring before surgery; atypical; not typical

B) polyuria; excessive production of urine; microorganism; a life form that is very small disjointed; taken apart at the joints

C) semiconscious; half or partly conscious

18. Gynecology is

A) A medical specialty concerned with purposeful depression of nerve function

B) A medical specialty concerned with the hypersensitivity of an individual to foreign substances and protection from the resultant infection or disorder.

C) The medical specialty that focuses on the female reproductive organs

D) They can perform a wide range of procedures

20.Allergy and immunology is …

A) A medical specialty concerned with the hypersensitivity of an individual to foreign substances and protection from the resultant infection or disorder.

B) A specialty concerned with the ear.

C) A subspecialty of internal medicine concerned with the study of inflammatory or degenerative processes and metabolic derangement of connective tissue structures that pertain to a variety of musculoskeletal disorders (e.g., arthritis).

D) A medical specialty concerned with manual or operative procedures used in the diagnosis and treatment of diseases, injuries, or deformities.

Module 2

Which one is correct?

1. … is the study of the body structure.

a) Physiology

b) Anatomy

c) Histology

d) Biology

2. The basic component of life is ….

a) Nucleus

b) DNA

c) cell

d) organelles

3. … in biology, a specialized structure occurring in most cells (except bacteria and blue-green algae) and separated from the rest of the cell by a double layer, the nuclear membrane.

a) Nucleus

b) DNA

c) cell

d) organelles

4. DNA technology is being used to help diagnose genetic diseases, such as .

A) sickle-cell disease and Huntington's disease

B) Headaches

C) Mononucleosis

D) Stomach Aches

5. … are essential to the pharmaceutical industry and medicine.

a) IT technology

b) DNA technology and gene cloning

C) Communicative methodology

D) Cloning

6. Cells combine to form different types of...?

A) Tissues

B) Muscles

C) Organs

D) Ligaments

7. … systems controls sexual development and function.

A) Endocrine

B) Neurological

C) Reproductive

D) Urinary

8. … is the result of the transmission of infections agents or microorganisms.

A) Sepsis

B) Infection

C) Asepsis

D) Inflammation

9. … is an **inflammatory** immune response triggered by an **infection.**

A) Sepsis

B) Infection

C) Asepsis

D) Inflammation

10. What type of bacteria can cause sepsis?

A) Streptococcus pneumonia

B) viruses, bacteria

C) fungi

D) Infectious

11. The spreading of microbes is called ….

A) Transmission

B) spherical (cocci)

C) rod (bacilli

D) spiral (spirilla)

12. …microbes challenge the immune system in many ways. Viruses make us sick by killing cells or disrupting cell function.

A) Algae

E) Pathogenic microbes

F) Archaea

G) Protozoa

13. Which of the following is not infectious agents or microorganisms?

A) Bacteria

B) Fungus

C) Protozoa

D) Heart

14. Which of the following organisms is a yeast?

A) Trychophyton

B) Streptococcus

C) Staphylococcus

D) Candida

15. Which of the following organisms is fungus?

A) Trychophyton

B) Streptococcus

C) Staphylococcus

D) Candida

16. Which of the following tools if used to measure the liquid?

A) Pipettor

B) Capillary tube

C) Hemostat

D) Centrifuge

17. There's too … salt in this soup.

A) much

B) few

C) many

D) big

18.Yesterday was … day of the year.

A) The hottest

B) Hot

C) More than

D) Hotter

19. During the special holiday the streets are … with shoppers. It's difficult to move.

A) Crowded

B) Boring

C) Funny

D) Quiet

20. He’s putting on … because he eats a lot of sweets.

A) Diet

B) Weight

C) Illness

D) Decease

6. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

6.1. СПИСОК ИСТОЧНИКОВ И ЛИТЕРАТУРЫ

Основная литература

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Дополнительная литература

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3. Barnett, M. A. (2012). More than meets the eye: Foreign language learner: reading theory and practice. Englewood Cliffs, NJ: Prentice Hall Regents.

4. Carrell, P. L. (2913). Metacognitive awareness and second language reading. Modern Language Journal, 73, 121-133.
5. Бервинова Н.С., Шарабокин Н.Н. Основы школьной физической культуры – Б.:2013. – 200 с.
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7. Государственный образовательный стандарт высшего профессионального образования Кыргызской Республики по направлению подготовки 532000 «Физическая культура» / Составители: Т.Н. Шевченко, Д.О. Абдырахманова. – Бишкек, 2015. - Электронный доступ: http://edu.gov.kg/ru/gosudarstvennye-obrazovatelnye-standarty-vysshego-professionalnogo-obrazovaniya/bakalavriat/ .
8. Глазер Л.Г., Мальцев В.С., «Спорт» учебно-методическое пособие по английскому языку, Алма-Ата 2011.
9. Galloway, V. (2011). Toward a cultural reading of authentic texts. In H. Byrnes (Ed.), Languages for a multicultural world in transition (pp. 87-121). Lincolnwood, IL: National Textbook Co.
10. Eskey, D. (2012). Reading and the teaching of L2 reading. TESOL Journal, 11(1), 5-9 p.
11. Лалетина Т.А. Интегрированный подход и использование предметно-языковой интеграции при обучении иностранному языку.
12. Laws of the game RUGBY UNION. Copyright International Rugby board 2013. Ireland. 209 p.
13. Лукша Т. Г., Шевалдышева Е. З., Обучение предмету средствами иностранного языка (CLIL) и фреймовый подход к обучению иностранному языку: инновационные технологии? – 2010. Электронный доступ: http://elib.bsu.by/handle/123456789/22501.
14. Манликова М.Х. Лингвоэтнокультуроведение: Знакомство с культурой страны изучаемого языка. Пособие по развитию русской речи. – Бишкек, 2011. - 398 с.

6.2. Перечень ресурсов информационно-телекоммуникационной сети «интернет», необходимый для освоения дисциплины

- Сайт Учреждения «СУ»
- Электронный ресурс «Электронная библиотека» Учреждения «СУ»
- http://www.getbodysmart.com/ap/respiratorysystem/menu/menu.html 2. http://bogglesworldesl.com/respiratorysystem.htm 3.

http://www.helpteaching.com/tests/197241/respiratory-system 4. http://www.helpteaching.com/search/respiratory 5. http://www.livescience.com/22616-respiratory-system.html 6. http://www.mhhe.com/biosci/ap/foxhumphys/student/olc/resreading2

7. ПЕРЕЧЕНЬ МЕТОДИЧЕСКИХ УКАЗАНИЙ ДЛЯ ОБУЧАЮЩИХСЯ ПО СВОИМ ДИСЦИПЛИНАМ

7.1 МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ К ПРАКТИЧЕСКИМ И ЛЕКЦИОННЫМ ЗАНЯТИЯМ

Учебно-методический комплекс (УМК) призван помочь студентам в организации самостоятельной работы по освоению английского языка. Комплекс содержит учебную программу дисциплины, составленную в строгом соответствии с учебным планом по специальности.

Учебно-методические материалы по подготовке практических занятий в УМК представлены отдельно по каждому разделу соответствии с программой дисциплины и последовательностью изучения курса:

В каждом разделе даны:

1) учебно-методические материалы лекционного курса, включающие подробный план лекции по каждой изучаемой теме, глоссарий, персоналий, вопросы и задания для самоконтроля, список основной и дополнительной литературы с указанием конкретных страниц;

2) учебно-методические материалы по подготовке практических занятий, содержащие планы проведения занятий с указанием последовательности рассматриваемых тем, задания для самостоятельной работы, краткие теоретические и учебно-методические материалы по теме, систему упражнений для самопроверки. Выполнение упражнений даст возможность студентам глубже усвоить теоретический материал, применить полученные знания на практике.

7.2. МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ К РЕФЕРАТАМ:

Формой контроля по отечественной истории является *написание реферата*. *Тема реферата* определяется преподавателем совместно со студентом исходя из имеющейся *в учебных программах примерной тематики*. Подготовленный реферат, представляемый студентом в сроки, которые определены преподавателем (обычно до окончания модуля), рассматривается в качестве главного условия, на основании которого такое лицо допускается к итоговому модулю или экзамену. По результатам проверки реферата

преподавателем на него составляется короткая *рецензия,* в которой в том числе выставляется и *оценка*. Тем самым не только удостоверяется подготовленность экзаменуемого лица по данному предмету, но и повышается ответственность данного лица, его преподавателя и предметной кафедры за качество такой подготовки. Таким образом, реферат является *одним из двух главных источников информации*, служащих определителем предмета, по которому проходила сдача экзамена. *Вторым таким источником* является тот *вопрос экзаменационного билета*, который специально посвящён определенным проблемам правоведение.

Само *написание реферата* осуществляется под контролем преподавателя или (в случаях его отсутствия) назначенного предметной кафедрой специалиста по правоведение. *Объем реферата* должен составлять приблизительно 1,0 п.л. (16 страниц), *его оформление* - соответствовать общим нормам написания научных работ. В том числе следует соблюдать требование печатать работу *шрифтом Times New Roman* 14, через *1,5 интервала*, с нумерацией страниц в центре верхней части листа. *Список литературы* (10-20 наименований) помещается в конце работы, ссылки на источники желательно оформлять посредством сносок, располагаемых в конце каждой страницы.

Структура реферата:

Введение, где обосновывается актуальность темы, степень ее разработанности, объект и предмет, цели и задачи реферата. При этом в содержании реферата «Введение» пишется без нумерации;

Основная часть реферата, которая может быть разбита на несколько тем с нумерацией. Например, «Часть 1» или «Глава 1» (прописными буквами), которые в свою очередь могут быть раздроблены на еще более маленькие под темы (прописными буквами). Например, «§ 1 главы 2»;

Заключение, где излагаются основные выводы, к которым пришел автор реферата. При этом в содержании реферата «Заключение» пишется без нумерации

Список использованной литературы по алфавитному порядку. При этом в содержании реферата «Список использованной литературы» пишется без нумерации.

Титульная и *вторая* (с официальной информацией) *страницы реферата* не нумеруются и в общем объеме его текста не учитываются. На *титульной странице* помещаются следующие данные:

название образовательного учреждения (прописными буквами) и *наименование кафедры* (строчными буквами) - вверху в центре;

тема реферата (строчными буквами, без кавычек, желательно с выделением жирным курсивом) с последующей фразой «*Реферат, выполненный по учебной программе 1 курса по предмету «Правоведение»»* - в центре средней части;

Ф.И.О. автора реферата полностью (строчными буквами) после фразы «*Реферат подготовил студент*», а также *фамилия и инициалы преподавателя* с указанием его учебной степени и звания фразы «Руководство написанием реферата осуществлял»- правой части нижней половины;

название города и год представления реферата - внизу в центре.

Написание рефератов необходимо для глубокого изучения дисциплины, формирует и развивает определенные навыки логического мышления, научной деятельности, а также помогает при успешной сдаче отработок и экзаменов. Учитывая выше сказанное мы рекомендуем перечень рефератов.

Литература, необходимая для написания рефератов предложена в списке рекомендуемой литературы.

7.3. МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ К ПРАКТИЧЕСКИМ ЗАНЯТИЯМ

Изучите по словарям и приложенному глоссарию основные понятия и термины Вам необходимо понять - что из себя представляют

При подготовке к семинарскому занятию используйте вышеперечисленную литературу.

Изучите и проанализируйте приведенные схемы. По каждому вопросу семинара советуем обратиться к предлагаемым схемам, в которых показана наглядная информация.

Старайтесь логически правильно выражать свои мысли, подводить итоги, анализировать вышеприведенные материалы, можете свободно высказывать своѐ мнение как на родном, так и на русском языках.

Учитесь составлять схемы, которые очень удобны для краткого изложения изученного материала и подведения итогов.

Широко используйте практические вопросы, тестовые задания для самопроверки, вопросы для обсуждения, контрольные вопросы, выводы лекции и предлагаемую литературу.

Дифференцированный зачёт - это конечная форма изучения определённого предмета и оценка результатов учебного процесса. Цель экзамена - завершить курс обучения по конкретной дисциплине и проверить сложившуюся у студента степень полученных знаний.

Перед экзаменом на консультации, как правило, спрашивают: нужно ли заучивать учебный материал? Все зависит от того, что именно заучивать. Прежде всего необходимо

запоминать определение понятий, ибо именно в нем фиксируются признаки, показывающие их сущность и позволяющие отличить данное понятие от других.

Однако преподаватель на экзамене проверяет не столько уровень запоминания учебного материала, сколько то, как студент **понимает** те или иные категории и проблемы, как умеет мыслить, аргументировать, отстаивать определенную позицию, объяснять, передавать заученную информацию своими словами, т.е. необходимо разумное сочетание запоминания и понимания, простого воспроизводства учебной информации и работы мысли. Для того, чтобы быть уверенным на экзамене, необходимо ответы на наиболее трудные, с точки зрения студента, вопросы подготовить заранее и **тезисно** записать. Запись включает дополнительные ресурсы памяти.

В идеале, к экзамену необходимо начинать готовиться с началом учебного процесса по данному курсу. Зачастую студенты выбирают «штормовой метод», когда факты закрепляются в памяти в продолжении нескольких часов или дней и лишь для того, чтобы «сдать» экзамен, но знания, приобретенные с помощью подобного метода, как правило, менее прочные и надежные, более бессистемные и формальные. Материал же, набираемый памятью постепенно, освещенный с разных точек зрения и неоднократно подвергавшийся обсуждению, образует качественные знания.

На консультациях студенты часто задают вопросы: каким пользоваться учебником при подготовке к экзамену? Однозначно ответить на данный вопрос нельзя. Дело в том, что не бывает идеальных учебников: они пишутся представителями различных школ, научных направлений, по-разному интерпретирующих одну и ту же проблему и поэтому в каждом из них есть свои сильные и слабые стороны, достоинства и недостатки, чему-то отдается предпочтение, что-то недооценивается либо вообще не раскрывается. Отсюда для сравнения учебной информации и полноты картины желательно использовать два или более учебных пособий.

Отвечая на конкретный вопрос экзаменационного билета, необходимо исходить из принципа плюрализма, согласно которому допускается многообразие мнений. Это означает, что студент вправе выбирать по дискуссионной проблеме любую точку зрения (не обязательно совпадающую с точкой зрения экзаменатора), но с условием ее достаточной аргументации.

При подготовке к экзамену важно наряду с учебниками использовать и **программу** курса, так как она включает в себя разделы, темы и основные проблемы предмета, в рамках которых и формируются вопросы для экзамена. Поэтому студент, заранее посмотрев программу курса, сможет лучше сориентироваться: чем ему может

помочь программа и в какой последовательности (чтобы структурировать знания, построить их в определенную систему) учить ответы на вопросы.

Программа составляется по определенным правилам: имеет свою логику изложения основного учебного материала, обладает структурой, в которой каждый элемент (раздел, тема, проблема) занимает строго отведенное ему место. Студент, учитывая то, где расположен экзаменационный вопрос (в каком разделе, теме), как он связан и соотносится с другими вопросами, сможет гораздо увереннее и грамотнее построить свой ответ.

На экзамене экзаменатор может задать студенту дополнительные и уточняющие вопросы. Если первые задаются помимо вопросов экзаменационного билета и связаны, как правило, с плохим ответом, то второе в рамках билета и направлены на уточнение мысли студента. Как правило с плохим ответом, то второе – в рамках билета и направлены на уточнение мысли студента.

Можно выделить следующие **критерии** оценок, которыми обычно руководствуются преподаватели на экзамене:

1) достаточно глубокое изложение идей, понятий, фактов, событий и явлений;

2) полнота и одновременно лаконичность ответа;

3) новизна учебной информации, степень использования других источников, помимо учебника и лекционного материала;

4) логика и аргументированность изложения;

5) грамотное комментирование, приведение примеров, аналогий;

6) культура речи.

Это значит, что экзаменатор оценивает как знания данного предмета (содержание), так и форму изложения их студентом.

Подготовка студентов к **экзамену** осуществляется в следующей последовательности:

• целенаправленное изучение дисциплины в ходе учебного процесса;

• обзорные лекции;

• консультации;

• итоговый государственный экзамен.

Билет экзамена Правоведение состоит из трех вопросов.

7.4. МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ ПО НАПИСАНИЮ КОНТРОЛЬНЫХ РАБОТ

1. Выбор темы контрольной работы

Самостоятельность студента проявляется, прежде всего, в выборе темы. Выбор имеет чрезвычайно важное значение, так как правильный выбор – залог успешной работы над темой и плодотворного ее завершения. По рекомендации преподавателя студент может ознакомится с примерной тематикой контрольных работ, и выбирает заинтересовавшую его тему.

Студент может предложить и свою тему, не указанную в рекомендательном списке. В этом случае необходимо согласовать с преподавателем.

Тематика контрольных работ содержит темы по систематическому курсу.

2. Составление плана контрольной работы

К каждой теме контрольной работы предлагается план. Однако студент вправе либо изменить существующий план, либо дополнить его по своему усмотрению. К составлению плана работы нужно приступать после того, как будет изучена литература по данной теме. Если студент хочет составить собственный план контрольной работы, то ему необходимо изучать рекомендованную литературу и отразить в плане круг проблем по изученной литературой.

3. Структура и оформление контрольной работы

Контрольная работа имеет следующую структуру:

- Тема
- План работы
- Сущность содержание
- Список использованной литературы

Оформление контрольной работы:

Контрольная работа выполняется на писчей бумаге стандартного формата А-4 (210,297). Текст располагается на одной стороне листа с полями: верхние – 20 мм, нижние – 25 мм, левое – 30 мм, правое – 15 мм. Компьютерный набор осуществляется шрифтом «Times New Roman» (обычный). Размер шрифта 14, междустрочный интервал – полуторный. Выравнивание по ширине. Количество листов – 10-12.

Все страницы контрольной работы нумеруется по центру снизу листа арабскими цифрами, включая список использованной литературы.

7.5.МЕТОДИЧЕСКИЕ УКАЗАНИЯ ПО ВЫПОЛНЕНИЮ САМОСТОЯТЕЛЬНОЙ РАБОТЫ СТУДЕНТОВ (СРС)

Самостоятельная подготовка к контактным занятиям

Контактное занятие – активная форма работы студентов. Участие в работе группы на занятии способствует более прочному усвоению материалов по правоведение, глубокому осмыслению различных явлений общественной жизни прошлого, пониманию актуальности изучаемых проблем.

Этапы подготовки к контактным занятиям:

1. Составление резюме прочитанной главы соответствующего раздела рекомендуемого теоретического источника или учебника.

2. Выполнение заданий по теме и их комментирование. Особо важным этапом является резюме прочитанного теоретического источника, так как это является важным условием подготовки к экзамену.

Итогом подготовки студентов к контактным занятиям должны быть их выступления, активное участие в коллективном обсуждении вопросов изучаемой темы.

Работа с учебной, научной литературой и архивными материалами

В основе подготовки к контактному занятию по правоведение лежит работа с рекомендованной учебной, научной литературой и архивными материалами. Более глубокому раскрытию вопросов способствует знакомство с дополнительной литературой, рекомендованной преподавателем по каждой теме занятия. Самостоятельная работа позволяет студентам проявить свою индивидуальность в рамках выступления на занятии, выразить широкий спектр мнений по изучаемой проблеме.

СРС с литературой, вдумчивое чтение источников, составление тезисов, подготовка сообщений на базе прочитанных материалов способствует гораздо более глубокому пониманию изучаемой проблемы, усвоению новых знаний на лекциях и семинарах, формирует у студентов своѐ отношение к конкретной теме, определяет их гражданскую позицию. Данная работа также предполагает обращение студентов к справочной литературе для уяснения конкретных терминов и понятий, введенных в курс, что способствует пониманию и закреплению пройденного лекционного материала и подготовке к семинарским занятиям.

Устный доклад (сообщение)

Итогом СРС является умение правильно излагать свои мысли перед аудиторией. При работе над составлением устного доклада по заданной преподавателем или выбранной самостоятельно студентом теме, необходимо использовать новейшие исследования как отечественных, так и зарубежных авторов. Литература должна быть разнообразной и

включать не менее 5 названий. Доклад должен содержать как минимум 2-3 отличные друг от друга точки зрения ученых по выбранной исследования.

8. ИНФОРМАЦИОННЫЕ И ОБРАЗОВАТЕЛЬНЫЕ ТЕХНОЛОГИИ

Образовательная технология – упорядоченная система действий, выполнение которых приводит к достижению поставленных целей и образовательная технология – конструирование учебного процесса с гарантированным достижением целей. Образовательные технологии обучения как обобщенная универсальная система, которая органично и оптимально интегрирует многие технологии, необходимые для достижения конкретных образовательных и развивающих целей и которая как целостное единство содержания и технологии его изучения реализуется через комплекс технологий:

Используемые интерактивные формы и методы обучения по дисциплине

Лекция – форма организации учебного процесса, при котором преподаватель передает большой объем систематизированной информации как ориентировочной основы для самостоятельной работы студентов.

Общий структурный каркас любой лекции – это формулировка темы, сообщение плана и рекомендуемой литературы для самостоятельной работы, а затем – строгое следование плану предложенной работы.

Методы и приемы интерактивного обучения практических занятий

- *Мозговой штурм* — поток вопросов и ответов, или предложений и идей по заданной теме, при котором анализ правильности/неправильности производится после проведения штурма. Читайте подробнее о мозговом штурме на уроках.
- *Кластеры*, сравнительные диаграммы, пазлы — поиск ключевых слов и проблем по определенной мини-теме.
- *Интерактивный урок* с применением аудио- и видеоматериалов, ИКТ. Например, тесты в режиме онлайн, работа с электронными учебниками, обучающими программами, учебными сайтами.
- *Круглый стол* (дискуссия, дебаты) — групповой вид метода, которые предполагает коллективное обсуждение учащимися проблемы, предложений, идей, мнений и совместный поиск решения.
- *Метод проектов* — самостоятельная разработка учащимися проекта по теме и его защита.

9. МАТЕРИАЛЬНО-ТЕХНИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

Методы изучения дисциплины

1. Лекционный материал
2. Самостоятельная работа
3. Теоретическое обоснование
4. Групповое обсуждение

Информационно-техническое обеспечение

1. Карты (территории, события, археологические раскопки)
2. Фотографии и рисунки (видные исторические деятели, события)
3. Примеры текстовых источников (исторические, современные, архивные)
4. Археологические данные (фотографии, рисунки, орудия труда)
5. Образцы материальной культуры народов Кыргызстана.

Технические средства обучения

1. Проекционная компьютерная установка
2. Лэптоп
3. Наглядные пособия (карты)

ЛИТЕРАТУРА

Основная

1. И.Ю.Марковина З.К. Максимова М.Б.Вайнштейн Учебник. – английский язык, 2016
2. *Л.Г. Козырева Т.В Шадская*: Учебник английский язык 2012.

10. КОНСПЕКТЫ ЗАНЯТИЙ

Lesson 1

- **Topic of the lesson**: Medicine in Ancient Civilization
- **Objectives:** 1. to introduce students to new material
  2. to do exercises using articles
  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? I will be your English teacher. Let me introduce myself. My full name is Abikova Aizada Konokovna. As you all no English is so important in our days. So you must do all your best to learn it. As English proverb says " Where is the will there is a way". You can write this proverb in your notebooks. Ok, lets begin our lesson than.

Teaching / learning activities

- **Instructions**

Как читается английские гласные, давайте вспомним некоторые правила чтения. Начнём с гласных букв:

Гласные буквы	1	2	3	4
	Открытый слог	Закрытый слог	Гласная + r	Гласная + re
a	[ei] Name baby	[æ] Man hand	[α:] Part start	[ɛə] Care prepare
E	[i:] We these	[e] Ten leg	[ə:] Her nerve	[iə] Here sphere
O	[ou] No note	[ɔ] Not dog	[ɔ:] Form sport	[ɔ:] More Ignore
U	[ou] Student music	[ʌ] But up	[ə:] Girl firm	[aiə] Fire Tired
I/y	[ai] My Time Все гласные читаются как в алфавите	[i] Big Six Все звуки краткие	[ə:] Girl Firm Все звуки долгие	[aiə] Fire Tired Все звуки сложные, кроме [ɔ:]

- **Practice**

Примечания: 1. В безударном положении гласные a, e, o, y, i, и
читаются как [э]. или [i]. Например: common, system, difficult, woman, direct, history.
2. Послебуквг, I, j буквau произноситсякак[u:]. Например: rule, true,June, blue.

- **Let’s do exercise. Open your books at the page 12**

Упражнение 1. Сравните чтение следующих слов. Почему одни и те же гласные читаются по-разному?

[ei]	[æ]	[iː]	[e]	[ou]	[ɔ]
brave	- man	he	- test	No	- hot
made	- had	be	- bed	Go	- from
Take	- map	we	- ten	note	- box
[juː]	[ʌ]	[ai]	[i]	[ɔː]	[əː]
student	- but	five	-in	aorta	- worse
use	- cup	life	-his	Sport	-work
music	- bus	type	-it	sort	-word

Упражнение 2.

Прочтите следующие слова. Обратите внимание на чтение долгих и сложных звуков. Есть ли такие звуки в русском языке?

[ɜ:]	**[d:]**	**[a:]**	**[aiə]**	**[i]**	**[eə]**
born	first	part	fire	here	care
morning	nurse	garden	tired	sphere	rare
for	person	large	inspire	mere	prepare

- **Let's do exercise. Open your books at the page 13 exersice 4**
- **Read and translate than try to retell it.**

. 1) Прочтите текст про себя и скажите, в каких древних цивилизациях развивалась медицина. 2) Прочтите вслух выделенные слова. ()братите внимание на чтение гласных в ударном положении.

Medicine in Ancient Civilization

Early man, like the animals,was subject (был подвержен) to illness and death. Life was uncomfortable, dangerous and hard. If the man had a wound (рана), his instinctive action was to

suck(отсосать) or lick (лизать) this wound. He knew that bleeding (кровотечение) very often cased (уменьшало) the pain of a wound.

Instinctive medical actions soon became ceremonial rituals which became very important in the life of a primitive man. Medicine progressed slowly. The medicine-man(лекарь) practiced magic(магия) to help (he man who was ill or had a wound.

As the centuries passed, man came to know anatomy from the animals he killed. The medicine-man became the central figure of the tribe(племя).

Between 7000 and 4000 B.C. new civilization developed from the early tribes. Ancient Egyptians were the earliest civilized people in the world.

They studied the human body. Magic still played an important part when the medicine-man treated (лечил)ill people but Egyptians also developed practical methods of treatment. Homer wrote that Egyptian doctors were the best in his time.

The early Indians in Mexico used narcotics in the treatment of diseases

(болезни). In Peru and India surgery (хирургия) was very developed. Amputations were very common in these countries.

Medicine in China began about 2600 B.C. The Chinese (китайцы) used acupuncture very often. The Chinese also discovered about two thousand medicinal substances (лекарственныевещества).

Упражнение 5. Прочтите следующие слова.

ee[i:]

[i:]

+ d, th = [e]

teach

head

tree

seat

health

street

meat

death

meet

Упражнение 6. Прочтите следующие слова.

^^ оо— _____ ^

o + th, m, n, v= [л]

перед звонкими перед глухими

[ʌ:]

mother

some

soon

book

brother

come

moon

took

other

son

fool

stomach(желудок) love

НАШИ ВЕРНЫЕ ПОМОЩНИКИ - ИНТЕРНАЦИОНАЛЬНЫЕ СЛОВА

Вы скоро узнаете из курса латинского языка, что Древняя Греция и Рим оказали огромное влияние на развитие медицины, фармации и на многие явления в истории мировой науки и культуры. Это историческое влияние нашло свое отражение в словарях почти всех стран мира. Все мы часто пользуемся словами и элементами древнегреческого и латинского языков. Словарное богатство этих языков послужило основой для создания многих тысяч так называемых интернациональных слов. Такие слова называются интернациональными, так как их можно найти в большинстве языков мира.

Так, например, слову интернациональный по форме и по содержанию соответствуют английское international, французское inter-national^), испанское internacional, итальянское internazionale, немецкое internationalи т.д. И все они происходят от латинского выражения internationesмежду народов или между народами.

Трудно представить себе речь современного человека без таких слов, как факт(factum),эффект(effectus),норма(norma),форма(forma),проект(projectum);результат(res ultatum),прогресс (progressus),интерес(interesse),минимум(minimum),максимум

(maximum),плюс(plus),минус(minus),темп(tempus) и многих других подобных слов. Само слово интеллигент(intellegens) латинского происхождения и первоначально обозначало понимающий. Когда речь идет об организации обучения, учебном процессе, о преподавании наук, мы пользуемся латинизмами:
семестр(semestris),студенты(studentes),экзамен(examen),лекции(lectiones), конспект(conspectus),аудитория(auditorium),институт(institutum)и многими другими.
Латынь напоминает о себе в ботаническом саду: роза(rosa),пальма(palma),фрукт(fructus) и в химической лаборатории:
элемент(elementum),эксперимент(experimentum),реакция(reactio),диффузия(diffusio),эмульсия(emulsio) и т.д.
В области медицины мы употребляем такие латинские термины, как доктор(doctores),рецепт(receptum),медикаменты(medicamenta),инфекция(infectio).
Особенно много латинских терминов употребляется в общественных науках, например: класс(classis),культура(cultura),материя(materia),конкретное(concretum), абстрактное(abstractum),термин(terminus).

Имена римских божеств Floraи Faunaвошли в биологию (флора и фауна). Божество рода Гений (Genius) стало синонимом выражения одаренный человек. Мы пользуемся римскими названиями месяцев: январь(Januarius),февраль(Februarius),март(Martius) и тд., да и само слово календарь(calendarium) римское.

Как в английском, так и в русском языке имеется большое количество интернациональных слов, близких по написанию и значению. Однако английские слова, даже близкие по письменной форме родственным им словам русского языка, резко отличаются от них по произношению.
Правила ударения в интернациональных словах также не одинаковы в английском и русском языках.

Различны и значения интернациональных слов в двух сравниваемых языках. К интернациональным словам относятся названия наук и их разделов, медицинские термины.

Слова, обозначающие понятия как специального, так и общего характера, очень часто встречаются в английском языке. Например, collect [ks'lekt]собирать,collection [ka'lekjn]собрание, коллекция, collective [ka'lektiv]общий, совместный;discuss [dis'kAs]обсуждать, discussion [dis'lovjn]обсуждение, дискуссия;demonstrate ['demonstreit]демонстрировать; experiment [iks'perimsnt]опыт, эксперимент.

Упражнение 7. Прочтите и переведите следующие интернациональные слова.
culture, structure, delegation, analysis, club, congress, constitution, student, history, atom, molecule, molecular, television

ЛОЖНЫЕ ДРУЗЬЯ ПЕРЕВОДЧИКА

Так называется немногочисленная группа интернациональных слов, непосредственный перевод которых ближайшим по звучанию словом русского языка может привести к ошибке и даже к искажению смысла предложения. Например, слово data ['deits] (форма множественного числа от datum) переводится как данные, а не «дата» (в значении дата используется слово date). Слово decade переводится на русский язык словом десятилетие, а не «декада» или «десятидневка». Вот еще ряд примеров: brilliant ['briljant]блестящий, сверкающий, а не «бриллиант»; delicate ['delikit]тонкий, хрупкий, а не «деликатный»; personal[pa:snl]личный, но не «персонал»; personnel [,p9:s3'nel]персонал;family [Taemili]семья, но не «фамилия»; magazine [,maega'zi:n]журнал, а не «магазин»; accurate ['aekjunt]точный, а не
«аккуратный».

Упражнение 8. 1) Прочтите текст про себя, найдите и переведите интернациональные слова, встречающиеся в тексте. 2) Найдите ответы на следующие вопросы.
1. What could the Greeks do? 2. What is the symbol of medicine?

Scientific Progress in Health in Greece

During the period of 5000 B.C. the medical knowledge from Egypt spread (распространились) to Greece where it was further developed. The Greeks knew how to stop bleeding (кровотечение). Such great philosophers as Hippocrates [hi'pokrstirz], Socrates, Plato and Aristotle were all connected with the development of science and medicine in Greece. The Greeks could diagnose illness. The Greeks also credited
(почитали) many gods and goddesses (богов и богинь) as they could cure diseases and bring health. Apollo was the god of disease and healing(исцеления). At a later date his mythical son Asclepius with his daughter Hygeia replaced Apollo. Hygeia was the Greek goddess of health. The cup of Asclepius, entwined with 'a serpent (обвитая змеей), is still the symbol of medicine. The cult of Asclepius was the most famous religious medical cult in history.

Hippocrates symbolized the greatness (величие) of the creative and classical period of history. He is called «the father of scientific medicine». Hippocrates was the first who spoke about the

natural causes (причины) of diseases. He also established fundamental principles of observation and treatment (лечение) that are used to this day.

НАСЛЕДИЕ ДРЕВНЕЙ ГРЕЦИИ

Многое заставляет нас вспомнить о том, что наука медицина или, как говорят, искусство врачевания происходит из Древней Греции. Об этом напоминают названия самых обыкновенных и всем известных предметов медицинского обихода, например, термометр или клизма, заимствованные из греческого языка. Из греческого пришло к нам слово surgery хирургия. В точном переводе оно означает «рукоделие». Слово therapy терапия тоже греческое, оно означает «уход за больными». Pediatrics педиатрия буквально значит «лечение детей», apsychiatry психиатрия — «врачевание души». Слово дизентерия греческое, впервые оно встречается в трудах Гиппократа. Античное, древнегреческое происхождение имеют и названия других болезней: бронхит, гастрит, пневмония, тиф, ревматизм, дифтерия.

Упражнение 9. Прочтите следующие слова.

ph= [f] в словах греческого происхождения

photo, phrase, physics, lymph, biography, telephone

Глаголы to be, to have

Present

Past

Future

“To be” is an irregular verb. It changes by person and number.

Lisa

My name is Lisa. I am 22. I am not married.
I am American. I am from Chicago.
I am a student.
My mother is a doctor and my father is a journalist.
My favorite color is blue. My favorite sports are football and swimming.

I am interested in art.

Positive		*negative*	
I am	**(I'm)**	**I am not**	**(I'm not)**
He	**(He's)**	**He**	**(He's not or he isn't)**
She }is	**(she's)**	**She }is not**	**(she's not or she isn't)**
It	**(it's)**	**It**	**(it's not or it isn't)**
We	**(we're)**	**We**	**(we're not or we aren't)**
You }are	**(you're)**	**You }are not**	**(you're not or you aren't)**
They	**(they're)**	**They**	**(they're not or they aren't)**

Do you know the song «В лесу родилась елочка»? We will use it's motive. Now, let's sing a song in order to memorize the forms of "to be".

I am we are

You are you are

He is they are

She is

make up your own sentences with to be and to have

Упражнение 10. Прочтите следующие предложения и назовите время,

В котором стоит глагол-сказуемое.

1.I am a student. 2. My grandfather was a chemist. 3. My favourite writer is Jack London. 4. I have many books by Jack London. 5. I shall be a doctor. 6. We had a lesson in chemistry yesterday.

Упражнение 11.Поставьте глагол to be или глагол to have в нужную временную форму.

1. We (to be) at the Institute yesterday. 2. I (to be) at the library tomorrow. 3. Oleg Petrov (to be) from Kursk. 4. He (to have) a book by Jack London last year. 5. My father and my mother (to be) doctors. 6. I (to have) a brother.

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КОНТРОЛЬНО-ОБОБЩАЮЩИЕ УПРАЖНЕНИЯ

Упражнение 13. 1) В каком столбике во всех словах гласные читаются как в алфавите? 2) В каком столбике все гласные произносятся кратко?

a) we valve name

b) must twelve basic

c) rise came tube

d) leg test man

(Ответы: 1) c; 2) d.)

Упражнение 14. 1) В каком столбике все гласные читаются как сложные звуки? 2) В каком столбике все гласные читаются как долгие звуки?

a) war park black birth

b) won word start girl

c) dark horse firm turn

d) care here pure fire

(Ответы: 1) d; 2) c. Если вы ошиблись, повторите правила что ния гласных в ударном положении на с. 11.)

Упражнение 15. 1) В каком столбике во всех словах сочетание ea
читается как [i:]? 2) В каком столбике во всех словах сочетание ea
читается как |e|?

a) fear read feather spread

b) deal treat meat heal

c) breath head dead death

(Ответы: 1) b; 2) c. Если вы ошиблись, вернитесь к упр. 5.)

Упражнение 16. Укажите букву английского предложения, эквивалентного русскому.

1. У студентов I курса была интересная лекция, a) First-year students had an interestinglecture.6)First-year students are at an interesting lecture, в)First-years students have an interesting lecture.

2. У нее была высокая температура, a) She has a high temperature, b)
She will have a high temperature, c) She had a high temperature.

3. Кафедра иностранных языков находится на 2-м этаже, a) The
Foreign Languages Department was on the second floor, b) The Foreign Languages Department is on the second floor, c) The Foreign Languages Department had two floors.

(Ответы: 1) a; 2) c; 3) b. Если вы ошиблись, проверьте себя по таблице «Глаголы to be, to have».)

- **Conclusion**

- **What was you home task for today?**

Who is ready? Come to the blackboard.

- **Have you any questions? What are the articles? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to …**

Your home task is to learn new words. read and translate the text.

- **Упражнение 12. Прочтите текст. 1) Расскажите, что вы узнали о Гиппократе. 2) Найдите предложения, где глаголы to be и to have употреблены в форме прошедшего времени. Прочтите вслух и переведите эти предложения.**

Hippocrates - «the Father of Medicine»

Hippocrates was born in 460 B.C. on the island (остров) of Cos. He was the son of a doctor. Hippocrates studied medicine and then he went from town to town where he practised the art of medicine. It is known that he drove out (изгнал) the plague ([pleig] чума) from Athens by lighting fires in the streets of the city.

Hippocrates was known as an excellent doctor and a teacher of medicine. He established medical schools in Athens and in other towns. He wrote several books and many case histories (история болезни). Hippocrates taught his pupils to examine the patient very attentively and to give him quick help. He created medicine on the basis of experience.

He taught that every disease was a natural process and it had natural causes(причина). Hippocrates treated diseases by exercise, massage, salt water baths, diet and suitable (нужный, подходящий) medicine.

He observed diseases such as pneumonia, tuberculosis and malaria, and he added to the medical language such words as chronic, crisis, relapse (рецидив) and convalescence (выздоровление).One of Hippocrates' theories was that the body had four fluids: blood, phlegm, yellow bile and black bile. Too much of one fluid, he thought, caused disease and the doctor had to restore (должен был восстановить) the balance. And only two thousand years later this theory was proved incorrect-(неправильный).Hippocrates made medicine an art, a science and a profession.Hippocrates is the most famous of all the Greek doctors. He is often called «the Father of Medicine» and some of his ideas are still important.

Doctors in many countries take the Hippocratic Oath (клятва). It is a collection of promises (обещание), written by Hippocrates, which forms the basis of the medical code of honour (кодексчести). The Oath of Hippocrates contains many of his basic thoughts and principles

- **The lesson is over. You may go. Have a nice weekend.**

Lesson 2

- **Topic of the lesson The Hippocratic Oath**
- **Objectives:** 1. to introduce students to new material
  2. to do exercises correct pronounciation
  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? You haven't news? There is an English proverb: "No news is good news".

Ok, lets begin our lesson than.

I have a tongue twister for you. What are these letters s, sh?

Sela sells sea shells at the sea shore.

- **Teaching / learning activities**
  - **Instructions**

СОГЛАСНЫЕ ЗВУКИ В АНГЛИЙСКОМ ЯЗЫКЕ

В английском языке, как и в русском, есть звонкие и глухие согласные звуки. Мы привыкли оглушать согласные звуки в конце слов. В английском языке этого делать нельзя.

Упражнение 2.

Прочтите следующие

bad плохой — bat Летучая мышь

beg просить — beck кивок

bed кровать — bet пари

digкопать —DickДик

[z]

[s]

As так как- ass Осел hiss

His его- hiss шипеть

Reviewing Some Basic Facts about the English Language

[к]

came comrade doctor common

+ e, i, y = [s] + i+ гласная

ск = [к]

в безударном положении = [J]

place medicine central cycle special social especiall y efficient

back cloc k blac k neck

Упражнение 4. Прочтите следующие слова.

[g] : go big began struggle

+ e, i, y = [cfe] : age village engineer gymnasium

[g] (исключения) : give get girl begin

В многосложных словах третий слог от конца, как правило, читается кратко.

Например: general, medicine.

Упражнение 5.Прочтитеследующиеслова.

begin, bag, coffee, agent, give, pencil, generation, central, centre

Упражнение б. Прочтите и переведите названия следующих наук.

history, physics, organic chemistry, normal anatomy, pathologic anatomy, topographic anatomy, biology, histology, physiology, surgery, therapy.

Упражнение 7. Прочтите следующие слова.

[ð] в служебных словах между гласными: **[Ɵ] в остальных случаях:**

This they that three theatre third

these them within both thick tenth

- **Practice**
- **Now, will you give your own examples?**
- **Let's do exercise. Open your books at the page 22**

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Упражнение 8. Выберите 3 пословицы или поговорки и прочтите их.

1.Don't live to eat, but eat to live. Неживи, чтобы есть, а ешь, чтобы жить.

2.Good health is above wealth. Доброе здоровье лучше богатства.

3.First think, then speak. Сначала подумай, потом говори.

4.Promise little, but do much. Мало обещай, но много делай.

5.Tastes differ. О вкусах не спорят.

Клятва асклепиадов

В пятом веке до нашей эры в Греции, на острове Кос, стояла густая роща. Она окружала храм — невысокое белое здание с колоннами. Храм был посвящен богу Асклепию и славился на всю Элладу.

Именно здесь, на скалистом островке Эгейского моря, родилась вся европейская медицинская наука. Здесь возникло братство асклепиадов, что-товроде школы врачей, считавших себя потомками бога Асклепия.

По обычаю каждый врач, завершив обучение на острове Кос, принимал обет. Подняв руку перед пылающим светильником, он повторял вслед за учителем: — Клянусь Аполлоном-целителем,Асклепием и Гигиеей...

Гигиея считалась дочерью Асклепия. В греческой мифологии этой богине была отведена особая роль: она следила за чистотой. Именно ей принадлежала замечательная идея - мыть руки перед едой. От имени этой богини происходит слово hygiene— гигиена.

Согласно преданию, клятва была записана под диктовку самого Гиппократа пером из заостренной тростинки.

—Клянусь, — говорил молодой врач, — в какой бы дом я ни вошел, Я войду туда для пользы больного. Я буду далек от всего пагубного, я не вручу никому ядовитого средства... И что бы я ни увидел в жизни людей из того, что не следует разглашать, я умолчу о том, считая подобные вещи тайной...

Клятва асклепиадов дожила до наших дней. До сих пор ее произносят — в несколько измененном виде — врачи, оканчивающие медицинский институт.

- **Here is a very interesting text at page 23 read and translate it into Russian**

Упражнение 9.

Прочтите про себя текст «Клятва Гиппократа».

1) Найдите и прочтите вслух те предложения, где говорится об этических принципах, которые должен соблюдать врач.

2) Прочтите и переведите выделенные слова.

The Hippocratic Oath

I swear by Apollo — the physician, by Asclepius Hygeia and Panaces, and I take to witness all the gods, and the goddesses, to keep according to my ability the following Oath.

I will prescribe regimen for the good of my patients according to my ability and never do harm to anyone. I will not prescribe a deadly drug, nor give advice which may cause him death.

In every house where I corne I will enter only for the good of my patients, I will keep myself far from all intentional ill-doing,and especially from the pleasures of love with women or with men,

be they free or slaves. All that may come to my knowledge in the exercise of my profession or outside of my profession, which must not be spread abroad, I will keep secret and will never reveal.

If I keep this oath faithfully, may I enjoy my life and practise my art, respected by all men and in all times, but if I swerve from it or violate it, may the reverse be my lot.

- **Conclusion**
- **What was you home task for today?**

Who is ready? Come to the blackboard.

- **Have you any questions? What is "to be"? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to …**

- **You home task is to learn new words and rhythm . And retell the text.**

Lesson 3

- **Topic of the lesson: Developments of the middle ages**
- **Objectives**: 1. to introduce students to new material
  2. to do exercises using vowels and sounds
  3. to develop their outlook
- Materials needed: handouts, teaching techniques, markers, blackboard, chalk
- Introduction

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you.

Whenever the weather is cold.
Whenever the weather is hot.
We'll whether the weather,
Whatever the weather,
Whether we like it or not.

- **Teaching / learning activities**
  - **Instructions**

ЧИТАЕМ «С ТОЛКОМ, С РАССТАНОВКОЙ»

При чтении необходимо делать остановки-паузы не только после произнесения целого предложения, но и после произнесения отдельных групп слов в предложении. Дыхание и речь имеют место одновременно. Средняя продолжительность одной фразы равна средней продолжительности одного дыхания (поэтому мы и говорим: «на одном дыхании»).

Цикл вдох-выдох— это физиологическая единица речи. Именно этот цикл ограничивает длительность фразы. Желая начать речь, мы производим вдох, и на выдохе говорим. Выдох кончился, фраза или часть ее прерывается, затем следует новый вдох, и следующий цикл дает новую «порцию» смысла. Ритм дыхания регулирует ритм речи.

Вспомните, что говорил Фамусов в комедии А.С. Грибоедова «Горе от ума» своему слуге Петрушке: «Читай не так, как пономарь, а с чувством, с толком, с расстановкой».

Итак, при чтении мы объединяем слова по смыслу и делаем паузы. Паузы выполняют логическую задачу: они помогают лучше понять смысл предложения. Между содержанием читаемого и способом произнесения должно быть полное соответствие.

Точно так же, как пианист берет аккорд — сумму звуков — сразу, не проигрывая каждую ноту в отдельности, так и при чтении нужно прочитывать на одном выдохе всю группу слов, связанных между собой по смыслу.

Упражнение 9. Прочтите слитно следующие сочетания слов.

a)a 'pencil, the 'pen, at the 'lesson, 'two 'pens, his t>rother, 'that room, an 'interesting 'book, a 'running boy

b)to 'sit, is 'sitting, are 'reading, will 'write, shall 'read, have 'taken, has 'opened, had 'closed, is 'opened, was trans'lated, have been ope'rated

ГДЕ ДЕЛАТЬ ПАУЗЫ ПРИ ЧТЕНИИ?

В любом предложении есть формальные признаки, которые помогают объединять слова по смыслу и способствуют пониманию читаемого.

I. При членении предложения паузы можно делать:

1. перед артиклем или другим определителем существительного:

Panacea, | the second daughter of Asclepius, | was the goddess of healing in Greece.

2. перед предлогом:

Now we use Greek terminology | in medicine and pharmacology.

3. перед глаголом:

Apollo | was the Greek god of light, | healing | and manly beauty.

4. перед союзом или союзным словом:

The Greeks thought | that gods cure diseases | and help to be in good health.

II. При членении предложения паузы не следует делать:

1.после артиклей или других определителей существительного:

Anatomy | studies the structure | of the human body.

2.после предлогов:

Biology | studies the life | of living beings.

3.после вспомогательных, модальных глаголов и глаголов-связок:

The study of anatomy | is very important | for medical students.

4.после союза или союзного слова:

We know | that the names of many diseases | are Greek in origin.

III. Служебные слова: артикли, предлоги, частицы, союзы, союзные слова, вспомогательные и модальные глаголы,глаголы-связ-ки, личные местоимения в функции подлежащего или прямого дополнения - читаются без ударения, редуцируются и произносятся слитно со словами, к которым они относятся.

- **Practice**

- Now, will you give your own examples?
- Let’s do exercise. Open your books at the page 28

Упражнение 10. В следующих предложениях вертикальной черточкой укажите, где при чтении вслух можно сделать паузы. На какие формальные ориентиры вы будете опираться при выполнении этого задания?

1. In the evening I usually read books or go to the cinema. 2. After the seminar we shall have a lecture in physics. 3. We have two lectures every day. 4. Chemistry was born in the process of man's practical activities. 5. Democritus taught that all bodies in nature consist of small particles.

Упражнение 11. Прочтите следующие предложения, обращая внимание на ударения и паузы в утвердительном предложении.

1 like to read very much. 2. My friend likes stories by Jack London. 3. We do not go to the Institute on Sundays. 4. Medical students study in the anatomical museum. 5. Students of the Medical Institute study Latin.

Упражнение 12. Прочтите текст про себя. 1) Найдите ответы на следующие вопросы.

1. What were two important developments during the Middle Ages? 2. When did the first hospitals appear? 3. In what countries were hospitals founded during the Middle Ages?

2) Прочтите вслух и переведите последний абзац текста. При чтении соблюдайте правила ударения и паузации.

Developments of the Middle Ages

A very important development during the Middle Ages was the hospital. Hospitals appeared in Ceylon early in the fifth century B.C. and in India in 260 B.C. Hospitals were founded during the Middle Ages in Italy, France, England, Spain and other European countries.

The number of hospital beds was not always an indication of hospital size, as usually great beds were used, and four or six patients were put on one bed.

'Hospitals were 'founded | to 'treat the 'sick \ people. A'nother de'velopment during the Middle 'Ages J was the 'foundation of Universities. 'Many of the 'great European ,Universities | were 'founded | during the 'thirteenth and 'four'teenth \ centuries. Bio'logical 'sciences | were 'taught in the , universities. 'Students 'also 'studied the 'human body | and some di \ seases.

БРАТЬЯ-АРТИКЛИВ

В английском языке нужно хорошо знать артикли. Шагу без них нельзя сделать. Английские артикли — неутомимые труженики языка. В беседе об артиклях нам будет помогать профессиональный переводчик с английского языка М.А. Колпакчи, автор замечательной книги «Дружеские встречи с английским языком». Итак, в английском языке имена существительные исчисляемые, т.е. существительные, обозначающие предметы, которые можно сосчитать, например: стул, карандаш, имеют в единственном числе неопределенный артикльа (an). Артикль ставится перед существительным. Если существительное имеет определение, то артикль ставится перед определением.

Когда же речь идет об уже упоминавшемся или известном говорящему предмете, то употребляется определенный артикльthe.Артикль является признаком существительного. Он произносится всегда без ударения, слитно со следующим за ним словом. Если налицо артикль — значит существительное рядом или идет вслед за каким-то определением. Например: a small girl, the first lesson. Если перед существительным стоит притяжательное или указательное местоимение, то артикль не употребляется. Например: my pen, this book.

Упражнение 13. Прочтите и переведите текст. Объясните употребление или отсутствие артиклей перед выделенными именами существительными.

Artists Study the Human Body

Even in Roman times, people were afraid of dead bodies. Dissection, that is the cutting open of bodies to learn more about the various parts and how they work, was banned by religion and the law. This delayed the study of anatomy for over a thousand years.

It is strange that the first effort to study the human body was made by Renaissance [ra'neisans] (Возрождение) artists such as Michelangelo, Raphael and Leonardo da Vinci. Leonardo wished to draw the body with more realism. So he carefully examined the shape of bones and muscles. He also dissected over thirty dead bodies and drew pictures of many internal organs, the veins and arteries.

МЕЛОЧИ ОГРОМНОЙ ВАЖНОСТИ

Заглянем в англо-русский словарь. Мы увидим, что одни и те же слова могут быть и названиями окружающих нас предметов, частей человеческого тела и т.д., и инфинитивом глагола в зависимости от того, поставим мы перед этим Словом артикль или частицу **to**. При этом значения существительного и глагола должны перекликаться:

a (the) handрука — to handвручать, передавать

a (the) dressплатье – to dressодеваться

(the) airвоздух — to air проветривать

Сравните несколько примеров:

1.I bought a new dress.Я купила новое платье. —The girl began to dress.Девочка начала одеваться.

2.The air in the room was fresh .Воздух в комнате был свежим. — We must air the room. Нужно проветрить комнату.

МЫСЛЬ СКВОЗЬ ПРИЗМУ АРТИКЛЯ

Английский язык не может существовать без артиклей. Даже в короткой английской фразе артиклей может быть несколько, и ни один из них не появился просто так, случайно. Каждый артикль в любой фразе, если предоставить ему слово, мог бы объяснить, что именно он обозначает, и как ошибочно прозвучала бы фраза, окажись на его месте другой артикль.

Возьмем для примера фразу, в которой содержатся четыре чередующихся артикля: Hecould not forget the face of a girl in Moscow with the profile of a Greek statue.Он не мог забыть лица увиденной им в Москве девушки с профилем греческой статуи.

Будем рассуждать об артиклях этого предложения. Что получилось бы, если бы английский автор перед словом лицо поставил неопределенный артикль? Смысл был бы таким: «Он не мог забыть одного из лиц девушки»(?!) Но когда речь идет о человеке или

предмете единственном в своем роде, то употребляется только определенный артикль. Следовательно, лицо и профиль в данной фразе требуют определенного артикля.

Перед греческой статуей, наоборот, можно поставить только неопределенный артикль, потому что даже до нынешнего времени сохранилось много таких статуй. Поставив перед греческой статуей определенный артикль, автор попал бы в смешное положение человека, который как-то видел одну греческую статую, скажем, Праксителя, и решил, что за многовековую историю Греции создана только эта.

Как выбрать артикль перед словом девушка?

Казалось бы, невозможно на основании одной только фразы разгадать, имела ли эта встреча продолжение, или это было «чудным мгновением», которое растворилось, и в памяти осталась только четкая классическая линия ее профиля.

И вот оказывается — как все просто! Если, говоря эту фразу, человек скажет the girl, значит продолжение было! Какое — сказать трудно, но ясно, что некоторое время, может быть, эта москвичка была его моделью, если он художник, или его музой, если он поэт, или его другом, если он был одинок и разочарован.

А вот если, вспоминая о ней, он сказал a girl, то сама неопределенность воспоминания говорит о том, что встреча была мимолетной. Возможно, девушка и не знала, какое впечатление она произвела на мимоходом встреченного человека, который, однако, «в тревоге мирской суеты» не может забыть полюбившийся ему профиль. Свое,чуть слышное, но авторитетное слово скажет артикль. Так не будем же, путая артикли, искажать мысли и чувства свои и чужие, называя постоянным то, что мимолетно, и наоборот.

Упражнение 15. 1) В каком столбике все слова содержат звук [ʃ] 2) В каком столбике все слова содержат звук [ʒ]?

a) production diffusion solution precision

b) pleasure measure division decision

c) function nation commission pressure

Упражнение 16.

1) В каком слове-конечный слог оканчивается звуком[t]?

a) depended b) stressedc) fired d) planted (Ответ:b.)

2) В каком слове конечный слог оканчивается звуком [d]?

a)Cried b) chanced c) transplanted d) pressed(Ответ: a.)

3) В каком слове конечный слог оканчивается звуком [id]?

a) pressed b) clickedc) nursed d) needed(Ответ:d.
Если вы ошиблись, повторите правило на с. 26)

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to learn new words at page 29-30-32. read and translate the text.

Упражнение 14. 1) Прочтите текст и скажите:
1. What do you know about Andreas Vesalius? 2. What did William
Harvey discover? 3. Who invented the microscope?

2) Объясните артикли или их отсутствие перед выделенными именами существительными

Studying the Human Body

In the sixteenth century a doctor named Andreas Vesalius studied anatomy on dead bodies. He used corpses (трупы) for his examinations. Vesalius was born in Brussels, got his education as a doctor in Paris. Later he moved to Padua University where he became Professor of anatomy. In 1543 he published an illustrated book - «The Working of the Human Body».

During the era of the fourteenth through seventeenth century the foundations of science and medicine were established. The art of surgery was improved by Ambroise Pare. Parecelsus became the father of twentieth-century chemo therapy. Andreas Vesalius made the study of anatomy a science based on direct observations. William Harvey, the English physician to King James I, discovered the circulation of the blood and his countryman (соотечественник) Thomas Sydenham developed the science of internal medicine.

In 1675 Antony van Leeuwenhoek, a Dutch brewer пивовар из Голландии) invented the microscope and observed bacteria and protozoa. He also described microscopic organisms. Other important discoveries were made in the seventeenth century. These discoveries helped to understand and study the human body, especially the various digestive glands, blood circulation,sensory nerve endings, the structure and function of the ear, salivary glands and the structure of bones.

Lesson 4

- **Topic of the lesson**: Rapid scientific Advances

- **Objectives:** 1. to introduce students to new material
  2. to do exercises using order formation of words in sentences
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

A box of biscuits, a box of mixed biscuits, and a biscuit mixer.

- **Teaching / learning activities**
  - **Instructions**

1	2	3			4	
Подлежащее	Сказуемое	Дополнение			Обстоятельство	
		Косвенное без предлога	прямое	Косвенное с предлогом	места	времени
We	Study		Anatomy.			
I	Go				To the institute	Every day.
The professor	delivers		Lectures	To the students.		
The teacher	Gives	us	All the explanations.			
We	Have		Practical lessons		In the laboratory on Monday.	

- **Practice**
- Now, will you give your own examples?
- Let’s do exercise. Open your books at the page 35

Упражнение 5. Прочтите и переведите следующие предложения, пользуясь схемой порядка слов в английском предложении.

1. Cocaine, a local anaesthetic, was discovered in the nineteenth century. 2. When the problem of pain was solved, the surgeons could carry out complicated operations. 3. The French chemist, physicist and bacteriologist Louis Pasteur discovered the «germ theory» of disease. 4.
Robert Koch worked in the field of bacteriology and immunology.

Упражнение 6. 1) Прочтите текст и переведите выделенные слова. 2) Просмотрите текст. Найдите в тексте ответы на следующие вопросы.

1. When was steady progress made in the health-related sciences? 2. What did G.B. Morgani explain? 3. What did Rene Laennec invent? 4. What do you know about the vaccination for smallpox? 5. What an aesthetics are used to relieve pain during operation?

Read and translate the text.

The Rebirth of Science

The eighteenth century was a period during which steady progress was made in the health-related sciences. New discoveries were made in physics, chemistry, anatomy, biology, physiology, bacteriology and other sciences.

The beginning of new theories of disease was stimulated by the first great pathologist Giovanni Battista Morgagni who explained the connection of the symptoms of disease in the living body with anatomical findings at autopsy. The English naval surgeon James Lind discovered the ways to treat scurvy (цинга). The great anatomist John Hunter became known as the founder of scientific surgery. The French physician Rene Laennec, with his invention of the stethoscope, extended the development of physical diagnosis, begun by Leopold Auenbrugger.

At the end of the century immunology was introduced in the field of health conservation (сохранениездоровья).
In 1776 the vaccination for smallpox (оспа) was discovered in England by Edward Jenner. With slight modification the same method is still used to provide smallpox immunity today.

In 1799 Sir Humphry Davy discovered that nitrous oxide, or «laughing gas», helped to relieve pain when breathed into the lungs and could make people temporarily (временно) unconscious. Forty years later Michael Faraday found that ether (эфир) had the same effect, and in 1846 a famous American surgeon of the time, John Warren, carried out a successive operation on a patient's throat using ether as an anaesthetic. In the following year it was found that chloroform could relieve pain during childbirth (роды).

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions?? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to learn new words at page 41read and translate the text

Rapid Scientific Advances

Great discoveries were made in the nineteenth century. One of them was the discovery of cocaine, which was very effective as a local anaesthetic. Surgeons could inject cocaine into a certain part of the body and deaden (заглушать) the pain in that part during the operation.
When the problem of pain was solved, surgeons could carry out long and complicated operations.

A very important discovery was made by the French chemist, physicist and bacteriologist Louis Pasteur. We know him as the originator of the «germ theory» of disease. He discovered fermentation and developed the process of pasteurization. Louis Pasteur produced the theory that disease and infection were caused by germs and he proved that they were spread through the air.

He found that germs could be killed in the liquids (жидкостях) by heat (теплом) and the term «pasteurization» was given to this process. Milk is treated in this way today to make it safe to drink.

Rudolf Virchov became known for his work in cellular pathology, and Herman von Helmholtz for his invention of the ophthalmoscope in 1850. Lord Joseph Lister introduced antiseptic surgery in 1867, and Wilhelm K. Roentgen discovered X-raysin 1895. He placed his hand in front of the apparatus and saw that the rays passed through the hand and cast a shadow (тень) of bones on the screen (экран).Because he did not know what the rays were he called them X-rays.

Lesson 5

- **Topic of the lesson**: Anatomy
- **Objectives:** 1. to give instructions
  2. to do exercises using there is, there are.
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Betty bought some butter,
But the butter Betty bought was bitter,
So Betty bought some better butter,
and the better butter Betty bought
Was better than bitter butter Betty bought
Before

- **Teaching / learning activities**
  - **Instructions**

- **There is** a man on the roof.
- **There's** a train at 10.30.
- **There are** 7 days in a week.

Singular

There is … (there's)
Is there…?
There is not… (there aren't)

There is a big tree in the garden.
T**here's** a good film on TV tonight.
"Have you got any money?"
"Yes, **there's** some in my bag."
We can't go skiing. **There isn't** any snow.

Plural

There are…
Are there…?
There are not… (there aren't)

There are some big trees in the garden.
There are a lot of accidents on this road.
A: **Are there** any letters for me today?
B: Yes, **there are.** / No, there aren't.
This restaurant is very quiet. **There aren't** many people here.

B

there is and **it is**

there is	**it is**
There is a book on the table.	I like this book. **It's** interesting.
(*not* 'It's a book on the table.'	(it = this book)

Compare:

- 'What's **that noise**?' '**It**'s a train.' (**it** = that noise)

There's a train at 10.30. **It**'s a fast train. (**it** = the 10.30 train)

- **There's** a lot of salt in this soup.

I don't like **this soup**. **It**'s too salty. (**it** = this soup)

- **Practice**

- Now, give me your own examples.
- Let's do exercise. Open your books at the page 113

- **Practice.**

- Let's do exercise. Open your books at the page 45

Упражнение 1. Укажите время глагола-сказуемогов следующих предложениях.

1. There will be a new student in our group. 2. There are eight faculties in the Moscow Medical Sechenov Academy. 3. There were two meetings last week. 4. In front of the rectorate there is a monument to I.M.Sechenov.

Упражнение 3. Выберите правильный вариант для русского предложения. Обратите внимание на порядок слов русского и английского предложений.

a)На лекции присутствует много студентов.

1.Many students are present at the lecture.

2. There are many students at the lecture.

b)Рядом с нашим институтом находится студенческое общежитие.

1. There is a student's hostel near our Institute

2. The hostel is near our Institute.

c)На нашем факультете было интересное собрание на прошлой неделе.

1.There was an interesting meeting at our faculty last week.

2.An interesting meeting was at our faculty last week.

Exercise 6. Insert articles where necessary.

1.“Is this …new plate?” “No, it isn’t.”2. “Is he reading … book?” “No, he isn’t. He is playing chess.” 3. “Is he going to write … letter tonight?” “Yes, he is. He is going to write … letter to his friend.” 4. “What color is … coat?” “It’s black.” 5. Show me … picture, please. 6. Open … textbook at …page 15, please. 7. He is closing … door. 8. Ann is going to … zoo on … Sunday. 9. Bill is having … bacon and eggs, … toast, …butter, … jam and coffee. 10. Is she going to have …tea or … coffee. 10. Is she going to have … tea or… coffee? 11. It is … Sunday. It is morning. It is ten o’clock in … morning. 12. Mrs. Smith is … French teacher. 13. Have … nice weekend. Thank you. … same to you.

Exercise 7. Insert “to be” where necessary.

1.The books and the notebooks … on the desk. 2. “… you going to the theatre tonight?” “Yes, I ….”3. “Good morning. How … you?” “I … fine, thank you. 4. “How … he?” “He … fine, thank you.” 5. “… it Saturday today?” “ Yes, it …” 6. “How old … your son?” “He … fourteen.” 7. “… you a teacher or a student?” “I … a student.” 8. … those classrooms large? 9. “… she a French teacher?” “Yes, she …” 10. “What Amy … doing now?” “She … writing a letter.” 11. “… you going to play chess with Mike or Peter?” “I … going to play chess with Peter.” 12. He … having toast, jam and tea. 13. … it a Saturday or Sunday today? 14. … you going to the theatre on Sunday?

Часть I

Слова к части I

skeleton ['skelitn] скелет

bone [boun] кость

backbone ['baekboun] ппозвоночник

breastbone ['brestboun] грудина

collar-bone['kotaboun] ключица

bony ['bouni] костный

vertebral column ['vaitibrsl 'кэ1эт]позвоночник

spinal column ['spaingl 'kotam] позвоночник,

спиннойхребеттrunk [trAgk] туловище

limb [lim] конечность

skull [skAl] череп

brain [brein] мозг

body ['badi] тело

include [in'klu:d] включать

exclude [iks'klu:d] исключать

jaw [d3o:] челюсть

rib [rib] ребро

join [d3D:in] присоединять

joint [d3o:int] сустав

bend [bend] сгибать(ся),гнуть(ся),изгибаться)

chest [tjest] грудная клетка

place [pleis] помещать;

be placed быть помещенным

heart [ha:t] сердце

lung[1лд] n легкое

arm [a:m] n рука

shoulder [Jouldd] n плечо

shoulder-blade лопатка

elbow [elbou] n локоть

wrist [rist] n запястье

firm [fa:m] ad]крепкий

firmly ['fa:mli] adv крепко

bind [baind] v связывать

palm [pa:m] n ладонь

thumb[Одш]n большой палец руки

framework ['freimwa:k] n остов, каркас

Упражнение 12. Просмотрите текст А и скажите, какие части скелета описаны в данном тексте.

Text A

The Skeleton

1.The bones form the skeleton of the body. The most important part of the skeleton is the backbone. It is so important that naturalists divided all animals into two classes - those which have a backbone and those which have none. All the higher animals have a backbone, or vertebral column and they are there for called (называются) vertebrate animals. The others are called invertebrate animals.

2.The bones which form the skeleton or bony framework of the body include the bones of the head, the bones of the trunk, the bones of the lower and upper limbs.
3.At the upper end of the backbone there is the skull. Inside the skull is the brain. The bones of the head include the bones which make up the box-like structure, the skull, and freely movable bone which forms our lower jaw.
4.There is another box of bones in front of the backbone. The ribs, which join the backbone behind and bend round towards the breastbone in front, form a strong cage - the chest, inside of which there is the heart.

Упражнение 13. 1) Прочтите и переведите текст А. Абзац 5 переведите письменно. 2) Найдите в тексте А ответы, на следующие вопросы и зачитайте их.
1. Is the backbone the most important part of the body? 2. What classes do the naturalists divide all the animals into? 3. What does the skull include? 4. The bones of the trunk include the spinal column, the ribs and the breastbone, don't they? 5. How does the wrist work?

Упражнение15.Подберитепарысинонимов.
vertebral column, injury, cage, damage, harm, box, backbone

Упражнение 16.Подберите пары антонимов.
to include, inside, immovable, in front of, lower, behind, invertebrate, to exclude, movable, vertebrate, outside, upper, higher

Упражнение 19. Переведите следующие предложения, обращая внимание на оборот there is.

1. There is the skull at the upper end of the backbone. 2. There are many illustrated books on Human Anatomy. 3. There are three bones in each finger. 4. There is no backbone in invertebrate animals. 5. There are special hospitals for children in every town.

Упражнение 20.Поставьте сказуемые в следующих предложениях в отрицательной форме, переведите предложения.
Образец: I went to see them yesterday.
I did not go to see them yesterday. \ 1. The professor asked many questions at the seminar. 2. I got many text-books from the library. 3. I entered the Institute last year. 4. We shall help him with his studies. 5. He knows Human Anatomy well.

Conclusion

- What was you home task for today?

  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.
- You home task is to make up learn new word skeleton.

Часть II

Слова к части II

distinguish [dis'tiggwij] vразличать

distinguishable [dis'tirjgwijabl]различимый

abdomen ['aebdaman] брюшная полость,живот

thigh [0ai] бедро

ankle ['aegkl] n лодыжка

toe [tou] n палец ноги

separate ['sepsreit] v отделять, разделять

separable['верэгэЫ] отделимый,раздельный

muscle ['mAsl] n мышца

muscular ['mAskjuta] a мышечный

forearm[Ъ:га:т] n предплечье

vertebra ['v9:tibra]pi.vertebrae[v9:tibri:] n позвонок

chamber ['tjeimba] n камера

cavity ['kaeviti] n полость

kidney ['kidni] n почка

head ['hed] n голова

thorax ['0o:raeks] n грудная клетка

ureter [jua'ri:ta] n мочеточник

bladder ['blaeda] n мочевой пузырь

liver ['liva] n печень

pancreas ['paegkrws] n поджелудочная железа

spleen [spli:n] n селезенка

pharynx ['faerigks] n глотка

alimentarycanal Laelfmentarika'nael] пищеварительный тракт

addition [a'dijn] добавление;in addition to вдобавок, в дополнение, кроме того, к тому же

lie [lai] v находиться

TEXT B

The human body is obviously separable into the head, the trunk and the limbs. In the head, the brain-caseor skull is distinguishable from the face. The trunk includes the chest or thorax, and the abdomen. Of the limbs there are two pairs — the upper, or arms, and the lower, or legs; and the legs and arms again are separable into several parts - the thigh, the leg and the toes in the lower limb and the upper arm, the forearm, the

The whole body, is bilaterally symmetrical. There are special bones in the trunk which are bound (связаны) together by a very strong and tough substance into a long column, which lies nearer the dorsal (or back) than ventral (or front) part of the body The bones are called (называются) the vertebrae. They separate a long narrow canal, the spinal canal, which lies upon the dorsal side.

The spinal canal contains a long white cord - the spinal cord - which is an important part of the nervous system. The diaphragm divides the ventral chamber into two cavities — the thorax and abdomen. The alimeptary canal trans-versesthese cavities from one end to the other and pierces the diaphragm. In the abdomen there are also two kidneys, which lie against each side of the vertebral column, the ureters, the bladder, the liver, the pancreas and the spleen. The thorax encloses the heart and two lungs. The latter lie one on each side of the heart.

The dorsal chamber, or cavity of the skull, opens into the spinal canal. It contains the brain, which is continuous with the spinal cord. The brain and the spinal cord together constitute the cerebrospinal system. The ventral chamber, or cavity of the face encloses mouth and pharynx, into which the upper end of the alimentary canal (gullet or oesophagus) opens.

Lesson 6

- **Topic of the lesson**: the muscles
- **Objectives:** 1. to introduce students to new material
  2. to do exercises can,must,may.
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

I thought a thought.

But the thought I thought wasn't the thought

I thought I thought

If the thought I thought I thought had been the thought I thought ,

I wouldn't have thought so much.

- **Teaching / learning activities**
  - **Instructions**

Ask each other questions using have or have got.

- Conclusion

- What was you home task for today?

  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to learn new words at the page 99 and read dialogues.

Часть I

Слова к части I

Skin п кожа

lay [lei] (laid) vкласть

layer['lei9] слой

average ['aevsnd3]a средний

male [meil] a мужского пола, мужской

female ['firmed]a женского пола,

женский cell [sel] n клетка

striated [strai'eitid] a поперечно-полосатый, полосатый

contract [kan'traekt] v сокращать(ся)

blood [bL\d] n кровь

vessel [vesl] n сосуд

digestive [di'd3estiv] a пищеварительный, пищевой

refer [ri'fa:] v относиться к чему-л.,иметь отношение

tissue ['tisju:] n ткань;

connective tissue соединительная ткань

smooth [smu:0] a гладкий, ровный

viscera ['visara]npi.внутренние органы; кишки

visceral [visaral] a относящийся к внутренним органам

cause [ko:z] v вызывать, быть причиной, заставлять; п причина

will п воля

response [ris'pons] п ответ,отклик; реакция

effect [ffekt] п результат,следствие; действие, влияние

environment [in'vaiarsnmant] п окружение; среда; окружающая обстановка

thatis (lat. i.e.) то есть

Упражнение 1. Найдите в каждом ряду глагол во временах группы Continuous (см. таблицу в § 11 Грамматического справочника).

1. was placing placed; is placed; 2. bound; bind; is binding 3. were bent; was bending; bent. 4. joins; is joining; were joined; 5. are not included; will be including; includes;

6. Is distinguishing; are distinguishing; distinguishes

Упражнение 2. Поставьте след. предложения в отрицательную форму.

Образец: We are working at the laboratory now.

We are not working at the laboratory now.

1. They were discussing the functions of brain for two hours running. 2. We shall be studying the bones of the palm for the whole day. 3. He is taking his examination in history now.

4. I was writing my report when she entered the library hall.

Упражнение 3. Переведите следующие предложения, определите временную форму глагола-сказуемого. ,

1.Smooth or unstriated muscles contract without any volition.

2.Blood vessels are contracting when they respond to the temperature.

3.The bones of our body make up the skeleton.

4. They were making their experiment from 5 to 7.

5. Students will learn the framework of the chest in the first term.

6. We shall be studying the functions of the heart during the whole lesson.

Упражнение 4. Найдите модальные глаголы в следующих предложениях. Переведите предложения на русский язык.

1. The lesson is over, you may go home.

2. The character of the joints distinguishes the degree of the motion which we can perform.

3. Smooth muscles can contract slowly.

4. We may divide animals into vertavbrates and invertebrates.

5. Comrade Petrov should stay at home as his leg still aches.

6. Future doctors must know human anatomy very well.

Упражнение 5.

Заполните пропуск и модальными глаголами can, must, may.

1. You … come for consultations on physics any time from 5 to 8. 2. We … know all the functions of the lungs. 3. ... I ask a question? 4. She ... come as she is ill. 5. Who … describe the tones of the trunk? 6. The joints ... move by the contraction of muscles.

Упражнение 6.

Переведите следующие предложения. Определите какую функцию выполняют слова that/those (см. § 34 Грамматического справочника).

1. The doctor says that he knows this patient. 2. The bones of the lower extremities articulate with the pelvic bones, those of the upper extremities extend from the shoulder girdle!

3. Through the centre of the vertebral column runs the canal that contains the spinal cord.

4. We liked that lecture very much. 5. The function of the liver is different from that of the spleen. 6. That was the book he wanted.

Упражнение 7. Прочтите следующие слова и сочетания слов.

a)muscle ['mAsl], muscular ['mAskjub], female ['fi:meil], fascia ['faeJio] (pi. fasciae ['faejii:], smooth [smu:0], striated [strai'eitid], t6 involve [in'volv], per cent [pd'sent];

b)a layer of muscles, 50 per cent of the total body weight, a characteristic feature of cardiac muscle

Упражнение 8. Познакомьтесь со значениями данных ниже суффиксов: ar,ive, ous, ion и приставкиen. Прочтите и переведите производные слова.

1. en- + основа прилагательного/существительного/глагола = глагол : large большой – to enlange увеличиваться; to close закрывать - to enclose окружать, ограничивать.

2. –ar – суффикс прилагательных, обозначающих принадлежность, или существительных, обозначающих лицо; muscle мыщца – muscular мышечный; to beg умолять – beggar нищий, попрошайка.

Nuclear, liar, lobular, circular

3. глагол + -ive = прилагательное: to act действовать – active активный.

Demonstrative, connective, effective

4. ous (-eous,-ious)—суффикс прилагательных, имеющих значение «обладающий качеством», обозначенным основой: to continue продолжаться) – continuous непрерывный; glory слава — glorious великолепный.

various, dangerous, infectious

5. -ion(-ation,-tion,-sion,-ssion)—суффиксы существительных, обозначающих действие или процесс, состояние или качество, результат действия: to separateотделять -separation отделение.

foundation, observation, motion, fermentation, foundation, classification, decision, submission

Упражнение 9. Прочтите и переведите следующие однокоренные группы слов.

1. muscle, muscular, musculature, musculation; 2. to close, to enclose, close, closely, closed, closing; 3. to contract, contracted, contracting, contractile, contraction; 4. to vary, variant, various, variable, variation, variety; 5. to connect, connecting, connection, connective

Упражнение 12. Просмотрите текст А. Скажите, на сколько частей можно разделить текст и как можно озаглавить каждую часть.

Text A

Types of Muscles

1.The word «muscle», according to one theory, comes from a Latin word that means «little mouse»: that is when a man's muscles are contracting they look as if a little mouse runs about under his skin. According to another theory the word “muscle” comes from a Greek expression that means «to enclose», that is, layers of muscles enclose the body. We know that the muscles commute approximately 50 per cent of the total body weight, slightly more in the average male than the female. Tendons, fasciae and the various organs themselves depend on the muscular system and the function of muscle cells.

2.There are three main types of muscular tissue that we identify and classify on the basis of structure and functions:

1) Smooth or visceral muscle,

2) striated or skeletal muscle,

3) cardiac muscle.

3. Smooth muscles can contract slowly. They make up the walls of the internal organs such as those of the blood vessels, and the digestive tract. Since we identify the internal organs as viscera, we sometimes call smooth muscles visceral muscles. The visceral muscles react relatively slowly to changes within the body and do so without the intervention of the will.

The walls of the blood vessels are contracting or expanding when they respond to certain chemical in the blood or in response to the effect of temperature but we cannot deliberately cause them to lift our arm or open our mouth. For this reason, we may call them involuntary muscles. Smooth muscle tissue consists of long cells. Smooth muscle fibres are bound
(связаны) into bundles by connective tissue which contain blood vessels and nerves.

4. Striated muscle tissue consists of large fibres in the form of bundles. Striated muscles are most for manipulation of the bones of the skeleton. Those are the muscles necessary for walking, running, turning the head and so on. That's why we sometimes call them skeletal muscles. This type of muscle tissue includes the large muscle masses of the body, the muscles of the arms, legs, back etc. It includes all those muscles which must react quickly to changes in the environment, i.e. those that become active through an effort of will. For this reason, we call striated muscles voluntary muscles.

5. Cardiac (heart) muscle is, in a sense, a cross between the previous two. A characteristic feature of cardiac muscle is that fibres have neither a beginning nor an end. In other words, the heart is simply a huge net of muscles in which all elements are continuous with each other. Cardiac muscles («heart» — Greek) have the strength and force of contraction of the skeletal muscle. Cardiac muscle is under complete involuntary control. In that, it resembles visceral muscle.

Notes

1.etc. (Lat. et cetera) [it'setrs] = and so on итакдалее

2.i.e. (Lat. id est) - читаетсяthat is, namely тоесть

Упражнение 13.1)Прочтите и переведите текст А. Абзацы 4 и 5 переведите письменно. 2) Найдите в тексте А ответы на следующие вопросы и зачитайте их.

1. How many types of muscular tissue are there? 2. How do we sometimes call smooth muscles? 3. What is another name of striated muscles? 4. What is the difference between the cardiac and skeletal muscles?

Упражнение 14. Подберите к латинским словам английские
эквиваленты.

Viscera heart

Cardiac lower jaw

Mandible internal organs

Esophagus gullet

Упражнение 15. Подберите пары антонимов.
voluntary, beginning, separated, to include, the former, to exclude, (he latter, connected, end, involuntary

Упражнение16.Дайте синонимы к следующим словами словосочетаниям,
injury, backbone, brain case, to be placed, to include

Упражнение 17. Прочтите следующие предложения и определите, какой мастью речи являются выделенные слова, найдите их значение в словаре. Переведите предложения.

The word «muscle» means «little mouse» in Latin. 2. A positive test means the presence of bacteria in the blood. 3. Tendons, fasciae, various organs and the bones function by means of muscles. 4. . Cardiac muscle is under involuntary control. 5. The involuntary muscles control the beating of the heart. 6. Nerve impulses cause the muscle to contract. 7. We do not know the cause of his illness.

Упражнение 18. Прочтите предложения, поставив глаголы, данные в скобках, в нужное по смыслу время группы Continuous. Переведите предложения.

The students (to work) in the physical laboratory from 9 to half past 10 yesterday. 2. When he came they (to classify) the bones of the upper extremities. 3. The walls of the blood vessels (to expand) when they respond to certain chemicals in the blood. 4. We (to discuss) the characteristic features of cardiac muscles now.

Упражнение 19. Замените времена группы Indefinite временами группы Continuous, дополнив предложения обстоятельствами времени: now, at11 o'clock, when you came, from...to, all the day, где необходимо. Переведите предложения.

First-year students work in the anatomy museum. 2. He will make a report on the muscular system. 3. She prepared the text “Voluntary and Involuntary Muscles» at home. 4. We translated 5 sentences from this text. 5. Last Monday we had a practical lesson on the structure and functions of smooth muscles.

Упражнение 20. Ответьте на вопросы по данному образцу:
Образец:Why can't you go home? (to attend the lecture)

I cannot go home, because I must attend the lecture. 1. Why can't you consult a doctor? (to go to the Institute) 2. Why can't you give me your book? (to return it to the library) 3. Why can't she finish her test? (to prepare for the examination)

Упражнение21. Переведите следующие предложения с модальными глаголами:can, may.
1. The joints between bones can move more or less easily. 2. In the ear we can only see the external ear and the external passage. 3. We may call the numerus, armbone, but there is no special name for radius. 4. We may use this drug three times a day.

Упражнение 22.Переведите следующие предложения, определите функции словthat (those).
1. The special feature of that textbook on anatomy is that it has many pictures. 2. One of the most interesting problems in medicine is that of pathogenesis. 3. Note that in the middle the bone consists of very compact tissue. 4. Will you name the diseases that are not infectious? 5. Metabolic diseases are those in which certain physiological processes become disturbed.

Упражнение 23. Переведите следующие предложения на английский язык.
1. По структуре и функции мышцы можно разделить на три группы. 2. Гладкие мышцы сокращаются непроизвольно. 3. Соединительная ткань гладких мышц включает нервы и кровеносные сосуды. 4. Поперечно-полосатые или скелетные мышцы реагируют на изменения в окружающей среде. 5. Волокна сердечной мышцы непрерывны.

Часть II

Слова к части II

produce [pra'dju:s] v производить,
uterus[ju:t9ras] n матка образовывать, давать
elongate ['ehngeit] vудлиняться)
consist [ksn'sist] v (of)состоять (из)
.vary [veari]v изменять(ся), варьировать
tongue [tAo]n язык
larynx ['laerigks] n гортань, глотка
[in'testinz]n pi. кишечник, кишки

adult ['aedAlt] nвзрослый,

various ['vearias] a различный совершеннолетний

supply [sa'plai] vснабжать, обеспечивать; n снабжение, обеспечение

nucleus ['nju:klias] n ядро

both ... and [bouO ... and] c как ... таки ..., и ... и ...

disturb [dis'ta:b] v нарушать

disturbance [dis'te:b9ns] n нарушение

complex['komplaks] a сложный

by means [mi.nz]ofпосредством, при помощи

source [so:s] n источник

subject [sab'd3ekt] v подчинять, подвергать воздействию

attach [a'taetf] v (to)прикреплять

subject ['sAbd3ikt] n предмет, тема

reach [ri:tj] достигать

Упражнение 1. Прочтите следующие слова в единственном и множественном числе:

ед. число мн. число

nucleus ['nju:klias]— nuclei [ai]

nucleolus ['nju:klialas]— nucleoli [ai]

trabecula [tra'bekjub]- trabeculae [i:]

fascia [Тефэ] - fasciae [i:]

vertebra ['vatobra]- vertebrae [i:]

Упражнение2.Переведите следующие предложения со словосочетаниями as well (as).

1. Smooth muscles form the coat of some internal organs as well as a part of the capsule of the spleen. 2. Smooth muscles form the coat of some internal organs and a part of the capsule of the spleen as well. 3. You are to know physiology as well as anatomy.

Упражнение 3. Просмотрите текст В (время — 10 мин). 1) Скажите, каково строение поперечно-полосатых и гладких мышечных тканей. 2) Найдите предложения, где употребляются: а)глаголы-сказуемые в форме Continuous; б) слова that (those).

3) Переведите эти предложения.

Text B

Skeletal and Smooth Muscles

Muscles are the active part of the motor apparatus: their contractions are producing various movements, when they are active. Functionally we divide all muscles into two groups: voluntary and involuntary muscles.

Voluntary muscles consist of striated muscle tissue and contract by I he will of the man. This group includes all the muscles of the head, trunk and extremities, i.e., the skeletal muscles, as well as those of some internal organs (tongue, larynx, etc.). The skeletal muscles are the organs of the muscular system. There are more than 400 skeletal muscles in the human organism: in adults they make up about two-fifthsof the total body weight. Each skeletal muscle has an arterial, venous, lymphatic and nervous supply. Muscles must always act in groups.

Skeletal muscles are complex in structure. They consist of muscle fibres of different length (up to 12 cm); the fibres are usually parallel to each other and are united (соединены) in bundles. Each muscle contains many such bundles. There are tendons at the ends of muscles by means of which they are bound (связаны) to bones.

Smooth muscles form the muscular coat of internal organs such as esophagus, stomach and intestines, bladder, uterus and so on. They also form a part of the capsule and the trabeculae of the spleen; they are present as single cells or as little cylindrical bundles of cells in the skin. They also form the walls of arteries, veins and some of the larger lymphatics. JSmooth muscles are not rich in blood vessels, as are striated muscles.

A smooth muscle is capable of spontaneous contraction and can contract in two ways. Firstly, individual cells may contract completely and secondly, a wave of contractions may pass from one end of the muscle to another^ Smooth muscle cells are usually elongated cells. In the skin and intestines they are long and thin, but in the arteries they are short and thick. They vary in length from 12—15mm in small blood vessels to 0,5 mm in the human uterus but their average length in an organ such as the intestine is about 200 m.

These cells have an oval nucleus that encloses nucleoli, and when the cell is contracting the nucleus may become folded or twisted.j

Muscles have both motor and sensory nerve fibres. Impulses (signals) about the state of the muscle reach the brain along the sensory fibres. The nerve impulses which cause the muscle to contract come from the brain along the motor fibres. Injury to the nerves which innervate muscles causes disturbances in voluntary movements (muscular paralysis).

Упражнение 5. Прочтите каждое суждение. Найдите в тексте предложения, более полно выражающие мысль данного суждения,

И прочтите их.

1.The skeletal muscles are the organs of muscles system. 2. Skeletal muscles are complex in structure. 3. Smooth muscles form the muscular coat of internal organs, blood vessels and skin. 4. Smooth muscles are capable of cdfhraction. 5. Smooth muscle cells have some characteristic features. 6. Muscles have nerve fibres.

ЧастьIII

Контрольно-обобщающиеупражнения к уроку 2

Упражнение 1. Укажите, в каких предложениях глагол стоит в формеContinuous.

1. The muscles are contracting under stimulation. 2. Striated muscle tissue consists of large fibres. 3. The walls of the blood vessels are con- t racting or expanding in response to a stimulus. 4. Striated muscles are necessary for manipulating the bones of the skeleton.

(Ответ: 1,3. Если вы ошиблись, повторите § 11 Грамматического справочника.)

Упражнение 2. Укажите и переведите предложения с модальными глаголами.

1.The muscles which we can control are called the voluntary muscles.

2.We do not control smooth and cardiac muscles. 3. Each type of muscles must perform definite functions. 4. Involuntary muscles control all the processes of the body. 5. We may divide all muscles into two groups.

(Ответ: 1, 3, 5. Если вы ошиблись, повторите § 17 Грамматического справочника.)

Упражнение 3. Укажите, в каких предложениях словоthatпереводится а) «что»; б) «который»; в) замещает существительное.

1. We call the muscles that form internal oigans are called visceral muscles. 2. We know that the cardiac muscle forms the heart. 3. The structure of smooth muscles differs from that of cardiac muscles.

(Ответ:а) 2; б) 1; в) 3. Если вы ошиблись, повторите § 34 Грамматического справочника.)

Lesson 7

- **Topic of the lesson**: cardiovascular system
- **Objectives:** 1. to introduce students to new material
  2. to do exercises using because, because of
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk

- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

The King would sing, about a ring that would go ding.

- **Teaching / learning activities**
  - **Instructions**

A

Because	**Because of**
Because is a conjunction so it connects two clauses. So, it will have subject and a verb after it. For example, 1. We couldn't go out because it rained. 2. Allen didn't go to party because he was ill.	This is a preposition and it is followed by a noun or a noun phrase (verb with –ing). 1. We couldn't go out because of heavy rain. 2. Allen didn't go to party because of his illness (or because of being ill) 3. The play was postponed because of bad weather.

Common Mistakes:

1. Students often write two separate sentences to write "because" or "because of". You should always include them in a single sentence.

For example,

1. Cyber crime rates have increased during the past decade because of widespread use of the Internet.

2. Cyber crime rates have increased. Because during the past decade the Internet became widespread. This is incorrect.

3. Because of the increase in the use of the Internet for banking. Cyber crime rates have gone up. This one is also incorrect.

You can see that in the last two sentences, there are two separate sentences. We always write "because" in the same sentence as we did in the first example.

Часть I

Слова к части I

cardiovascular[ka:diou'vaeskju:b] сердечно-сосудистый

circulate ['sakjuileit] v циркулировать

circulation [,sd:kju:'leijn] n кровообращение

circulatory [,s9:kju:leit9ri] a циркуляторный

artery ['a:tsri] n артерия

vein [vein] n вена

capillary [ka'pilari] n капилляр

thorax ['0o:raeks] n грудная клетка

thoracic [09'raesik] a грудной

atrium ['eitriam] n предсердие

auricle ['o:rikl] n предсердие

ventricle ['ventnkl] n желудочек

valve [vaelv] n клапан

pump[рлшр] v накачивать; n насос

aorta [ei'o:ta] n аорта

dissolve [di'zolv] v растворять(ся)

nourish['плп/] v питать(ся)

nourishment ['nAriJmsnt] n питание

while [wail]cj в то время, как; тогда как

impurity [im'pju:driti] примесь

fluid ['fluid] жидкость

minute [mai'nju:t] маленький,мельчайший

Упражнение 1. Назовите основные формы следующих глаголов.

to keep, to flow, to mean, to think, to come, to give

Упражнение 2. Найдите в каждом ряду глагол во временах группыPerfect(см. таблицу в § 12 Грамматического справочника).

1. called; has called; is calling; 2. had thought; think; is thought; 3. shall have come; came; comes; 4. have given; gave; will give; 5. distinguish; has distinguished; distinguishes

Упражнение 3. Определите время и форму глагола-сказуемого в следующих предложениях.

1. We have just learned the general structure of the body. 2. The bones of the skull protect the brain structure from injury. 3. All the bones of the body are of different types. 4. Muscles are constantly assisting in the body movement. 5. The doctor had already examined the girl's heart when the professor came in. 6. We shall have got the books in anatomy by tomorrow morning.

Упражнение 4. Прочтите следующие группы слов. Найдите прилагательные в сравнительной и превосходной степени.

more flexible bony tissue, lower arm, less compact bone, inner portion,
the longest bone, the most difficult test

Упражнение 5. Прочтите и переведите следующие предложения; определите, какую функцию выполняют словаbecauseиbecauseof.

1. Penicillin is an important antibiotic because of its antiseptic properties. 2. Many infectious diseases are dangerous because it is difficult to treat them. 3. The false ribs received this name because they join the seventh rib at the point before they reach the sternum. 4. Acetabulum got its name because of its resemblance to a rounded cup which the Romans used for acetum.

Упражнение 6. Прочтите следующие слова и переведите их.

atrium ['eitriam], serum ['sidram], to contain [kan'tein], tricuspid Itrai'kAspid], valve [vaelv], oxygen ['эк$к1з(э)п], diaphragm ['daidfraem], blood [bUd]

Упражнение 7. Отработайте чтение следующих предложений.

1.By the [з] cardio'vascular /system j we 'mean the /heart, | the |i] /arteries, | the [э] /veins | and the [э] capillaries of the [э] human \body. |

2.From the 'left /heart | the well-oxyge'nated /blood| is 'pumped into a 'large /artery j 'called the [i] a\orta. |

3.The /artery j that re'ceives the 'blood from the 'right /ventricle j and 'carries it to the /lungs j is the 'pulmonary \artery. |

Упражнение 8. Запомните значения нижеприведенных суффиксов. Прочтите и переведите производные слова.

1.прилагательное + -1y= наречие: gradualпостепенный— graduallyпостепенно.

anatomically, functionally, finally, freshly

2.-ist—встречается в существительных, обозначающих людей по профессии, занятию, убеждениям.

ecologist, chemist, anatomist, physiologist

3.-ate[eit] — суффикс глагола.

to communicate, to circulate, to separate, to graduate

4.-ate[it](-ete,-ite,-ute)—суффикс прилагательных и существительных.

graduate, delegate, ultimate, accurate, complete, minute

5.-ward(s)- встречается в прилагательных, наречиях, предлогах, обозначая направление.

towards, upward, downwards, eastward, inward, backward, forward

Упражнение 9. Прочтите и переведите следующие гнезда слов.

1. pure, impure, purity, impurity; 2. to weigh, weight, weightless, weighty; 3. to circulate, circulatory, circulation; 4. artery, arterial, arteriole, arteriosclerosis; 5. to separate, separately, separation; 6. to nourish, nourishment

Упражнение 10. Прочтите и переведите следующие словосочетания.

molecular weight, to put on (to gain) weight, to lose weight, systemic circulation, circulating system, poor circulation, venous pulse blood, thoracic cavity

Упражнение 11, Просмотрите текст А. Разделите текст на 4 части и выразите основную мысль каждой из них.

Text A

The Circulatory (Cardiovascular) System

1.The cardiovascular system is the system of blood circulation. By the cardiovascular system we mean the heart, the arteries, the veins and the capillaries of the human body.

2.The centre of the circulatory astern is the heart. The human heart is a cone-shape dorgan, about 5 fnches1 long and 3 1/2 inches broad. It weighs aboutg in the adult male, 6 ounces in the female. It lies in the thoraiic'caity, just behind the breastbone and between the lungs. The heart is a hritlovv muscle which four chamber. The right heart consists of an tipper'chamber, the atribm or the'auricle and a

Jover chambere ventricle. Between these two chambers is a one-waylalve, the tricuspidvklve. The left heart has two chambers, but the valve that separates its chambers we call the mitral valve. Although the heart is a unit, anatomically and functionally, we may think of it as of two pumps - the «right heart» and the «left heart». The right heart receives blood from the veins and

pumps it into the lungs by way of the lesser circulatory system. In the lungs the blood receives oxygen. Then it moves into the left heart. From the left heart thewell-oxygenated blood moves into a large artery, the aorta. The blood returns to the heart by means of the veins. The walls of the capillaries are so thin that the dissolved nourishment that has come from the digestive system and the oxygen that has come from the lungs can pass through them into the tissues of the body and so nourish it. The capillaries form a close network all over the body. They gradually join together and get larger, and become veins.

3.Blood vessels that receive blood from the ventricle and lead it away from the heart and towards other organs are arteries («air duct» — Greek). The vessels received this name because the early anatomists assumed that they had been empty in dead persons and had carried air.The artery that takes up theblood from the right ventricle and carries it to the lungs is the («lungs» — Latin). The pulmonary artery divides in two - one branch leads to the right lung, the other — to the left. The arteries continue to divide and subdivide and form smaller and smaller vessels with thinner and thinner walls. The smallest arteries are the arterioles and these finally divide into capillaries («hairlike» — Latin). We name them so because of their fineness, though actually they are much finer than hairs.

4.Gradually the capillaries begin to join into larger vessels. Such larger blood vessels that carry blood to the heart from the organs are the veins. The smallest of these are the venules.

5.The particular vein into which the capillaries and venules of the lungs finally unite is the pulmonary vein. The pulmonary vein carries the freshly oxygenated blood to the left auricle. The pulmonary artery and pulmonary vein make up the pulmonary circulation.

6.The contraction of the left ventricle forces the blood through a
one-wayvalve into the aorta («to lift up» — Greek). Thp aojjta is the largest artery in the body. It movfes upward at first (the ascending orta), but then arches over dorsally (the arch of the aorta). In its downward course, the aorta passes through the diaphragm.

7. The blood is a red fluid, which coagulates when escapes, from a blood vessel. It consists of a colourless fluid, plasma or and many millions of minute bodies, the corpuscles.

Notes

1.inch(сокр.in.) = 2,54 cm (centimetres)

2.ounce(сокр.oz.) = 28,33 gram (grammes)

Упражнение 12. Подберите к латинским словам английские эквиваленты.

Male spinal

Female chest

Thorax man

Dorsal woman

Упражнение 13. Подберите пары синонимов.

substance, to supply, to nourish, because of, because, minute, tiny, to provide, to obtain, due to, fine, as, matter, to feed

Упражнение 14.Подберите пары антонимов.

larger, upward, ascending, colourless, thick, colourful, thin, descending, downward, smaller

Упражнение 15. Переведите следующие предложения. Определите, какими частями речи являются выделенные слова.

1. The number and even nature of the clots in the veins and arteries differ according to their size. 2. Under the microscope we can see the membrane which consists of a number of separate cells. 3. Blood includes minute bodies, which give the blood its colour. 4. The heart makes70-80 contractions a minute.

Упражнение 16. Переведите следующие предложения. Определите временную форму глагола-сказуемого.

1. The heart is beating in the experimental animals even when we destroy the nerve supply. 2. The vena cava brings deoxygenated blood which has passed through the body to the right atrium. 3. During diastole, the atrium of the heart is filling with blood from the venae cavae and the pulmonary vein. 4. We were discussing the anatomy of the heart at the English lesson yesterday. 5. We shall still be working at this problem for another week. 6. The teacher corrected the tests which the students had written the day before.

Упражнение 17. Поставьте прилагательные в следующих предложениях в сравнительную или превосходную степень.

1. The veins are (large) than capillaries. 2. The aorta is the (large) artery which distributes the blood throughout the body. 3. I know the structure of the heart (good) than that of the lungs. 4. Anatomy is (difficult) subject for me. 5. The human heart weighs (little) than a pound.

Упражнение 18. Найдите в каждой колонке прилагательное в сравнительной степени.

л) shoulder longer closer larger

b) other liver smaller summer

c) thinner father thicker greater

Упражнение 19. Переведите следующие предложения, выбрав подходящее по смыслу слово в скобках.

1. The capillaries got their names (because, because of) they resemble hairs. 2. The blood reaches the arteries (because, because of) the contraction of the heart. 3. The two blood streams do not readily mix in the ventricle (because, because of) the muscular meshwork within its cavity. 4. (Because, because of) arteries carry blood away from the heart, they must be strong enough to withstand the high pressure of (he pumping action of the heart. 5. If we stimulate the nerve in the ear by electricity, the ear becomes blanched (because, because of) the arteries contract.

Упражнение 20. Переведите на английский язык.

1.Сердечно-сосудистаясистема включает сердце, артерии, вены и капилляры. 2. Кровь возвращается к сердцу по венам (посредством вен). 3. Правая и левая части сердца состоят из двух камер: предсердия и желудочка. 4. При сокращении левого желудочка кровь проталкивается в аорту. 5. Стенки капилляров такие тонкие, что питательные вещества и кислород проходят через них в ткани.

Упражнение 21. Опишите сердечно-сосудистую систему, используя рис. 3.

Часть II

Слова к части II

close [klous]a близкий, закрытый
tiny ['taini]a очень маленький, крошечный
constitute ['konstitju:t] v образовывать, составлять
dilate [dai'leit] v расширять(ся)
substance ['sAbstans] n вещество
dilation [dai'leif(d)n] n расширение, распространение
transparent [traens'peargnt] a прозрачный, просвечивающийся
flow [flou] vтечь, протекать; ток (крови)
neck n шея
blood pressure[Ъ1лс1 'preja] кровяное давление
occur[э'кэ:] v происходить; встречаться
trace v следить, проследить, находить, различать
thick [Oik]a густой, частый, плотный

though[боu]cj хотя, несмотря на
the same тот же самый
clot[kbt] п сгусток крови, тромб
due [dju:]a должный, надлежащий;
кровяное давление
due to вследствие, из-за,благодаря;
be due to быть вызванным,быть обусловленным

Упражнение 1. Переведите следующие словосочетания.
1. on the one side, on the other side, on the opposite side; 2. due to, in due time, with due respect; 3. according to the rule

Упражнение 2. Переведите следующие предложения. Определите какой частью речи являются выделенные слова.
1. The walls of the arteries and veins are thicker than those of the capillaries. The former are less permeable for fluid. 2. There are no blood capillaries in certain parts of the body. These are the epidermis, epithelium and some others. 3. We call the valve that separates the chambers, the atrium and the ventricle the mitral valve. 4.Both the superior and inferior venae cavae empty into the right atrium. Both carryve nous blood.

Упражнение 3. Просмотрите текст В (время 10 мин). 1) Скажите, что является предметом обсуждения. 2) Найдите предложения, где употребляются: а) глаголы-сказуемые во времени Perfect;б) прилагательные в сравнительной и превосходной степени; в) слова because, because of. 2) Переведите эти предложения.

TextB
Almost all parts of the body are vascular. Minute and very close-set canals, which have opened into one another traverse them and constitute a small-meshed network. The canals or rather tubes have distinct but very delicate walls. The walls contain a membrane that includes a number of thin epithelial cells, which are bound (связаны) together at their edges. There is a small oval nucleus in each of these cells. These tubes are the blood capillaries. They vary in diameter from 7 to 12 μηι. But there are certain parts of the body in which these blood capillaries

have been absent. These are the epidermis and epithelium, the nails and hairs, the substance of the teeth and the transparent cornea of the eye.

Tiny rings of muscles, precapillary sphincters, regulate the flow of blood into capillaries. The question of nervous control of the precapillary sphincters still remains the subject of the study.

The capillary tubes contain the red fluid, blood. They join on opposite sides and form larger tubes, with thicker walls, which are the smallest arteries on the one side, and veins, on the other. These again join on to larger arteries and veins, which ultimately communicate by a few principal arterial and venous trunks with the heart. The mere fact that the walls of these vessels are thicker than those of the capillaries constitutes an important difference between the capillaries and the small arteries and veins.

The most important difference between these vessels and the capillaries, however, is that their walls are not only thicker, but also more complex. They have got several coats, one, at least, of which has been muscular. The number and even nature of these coats differ according to the size because the vessels are not the same in the veins as in arteries, though the smallest veins and arteries resemble each other.

The venous system starts with the venules into which the capillaries empty. Small veins join and form larger ones. The larger veins join and form the venae cavae. The superior vena cava collects the blood from the head, neck, arms, and thorax, and the inferior vena cava, from the legs and abdomen. Both empty into the right atrium.

Pressure in the venous system is low. In the vein at the level of the heart the pressure would be more than 5-7 mm Hg.1 It is evident that in the erect position blood that returns to the heart from the feet has to overcome the force of gravity through a distance of about 4 ft.2 Veins, probably because of the low blood pressure and the absence of pulse waves, are in comparison to arteries, relatively immune to disease. Phlebitis sometimes occurs; this is the formaiton of blood clots within veins because of some infectious process in their walls.

Notes

Упражнение 5. Найдите в тексте предложения, более полно выражающие мысль каждого данного суждения, и прочтите их.

1. The capillaries form a small-meshed network. 2. The blood capillaries are absent in some parts of the body. 3. There are some differences between the veins, arteries and capillaries. 4. The veins are more immune to diseases than the arteries. 5. Phlebitis is due to some infection.

Часть III

Упражнение 1. Укажите, где глагол to have не переводится.

1. We have attended English lessons since September. 2. The heart is a hollow organ and has four chambers. 3. I have never been to Yaroslavl. 4. The capillaries have thin walls.

(Ответ: 1, 3. Если вы ошиблись, повторите ? 12 Грамматического справочника.)

Упражнение 2. Переведите прилагательные и определите их степень сравнения.

1. slightest; 2. most coloured; 3. more delicate; 4. more permeable; 5. less infectious; 6. normal; 7. much more complex; 8. less transparent; 9. important; 10. much thicker; 11. much lower

(Ответ: положительная степень - 6, 9; сравнительная степень -

3, 4, 5, 7, 8, 10, 11; превосходная степень - 1, 2. Если вы ошиблись, повторите ? 3 Грамматического справочника.)

Упражнение 3. Укажите, в каких предложениях слово because переводится «так как», «потому что». Переведите эти предложения на русский язык.

1. The heart pumps about five litres of blood in one minute because it beats 60-80 times a minute and ejects about 130 cubic centimetres of blood at each beat. 2. The woman's heart beats 6 or 8 times a minute faster than that of the man because of the smaller size of her heart. 3. The mouse's heart flutters at 500 beats per minute because of its tiny size.

4. The frog's heart beats 30 times per minute in warm weather because cold-blooded animals live at a much lower level of internal chemical activity.

(Ответ: 1, 4. Если вы ошиблись, повторите ? 37 Грамматического справочника.)

Упражнение 4. Определите, в каких предложениях выделенное слово является сказуемым. Переведите эти предложения.

1. The heart beats 72 times a minute. 2. The heart beats were weak. 3. The heart pumps the blood through the circulatory system. 4. The

heart is a pump that forces the blood through the circulatory system. 5. Rest is necessary after hard work. 6. The dark glasses rest my eyes.
(Ответ: 1, 3, 6. Если вы ошиблись, повторите ? 10 Грамматического справочника.)

Упражнение 5. Переведите следующие предложения.

1. They obtained good results. 2. The fluid reduces friction which results from the heart movement. 3. A temperature decrease results in a slower heart rate. 4. We began our work after due consideration. 5. His sudden weakness was due to anaemia.

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.

- You home task is to learn new words retell the text

Lesson 8

- **Topic of the lesson**: the respiratory system
- **Objectives:** 1. to give instructions and explain the differences of tenses
  2. to do practical exercises
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.
How much wood a woodchuck chuck
if a woodchuck could chuck wood?

A woodchuck could chuck as much wood
as a woodchuck would chuck
if a woodchuck could chuck wood.

- **Teaching / learning activities**
  - **Instructions**

Часть 1

Слова к части 1

respiration [respə′reɪʃən] *n* дыхание
respiratory [rɪs′paɪərətərɪ] *a* дыхательный
waste products [′weɪst ′prɔdəkts] продукты распада
remove [rɪ′mu:v] *v* удалять, выводить
inhale [ɪn′heɪl] *v* вдыхать
inhalation [ɪnhə′leɪʃən] *n* вдыхание
exhale [eks′heɪl] *v* выдыхать
exhalation [ekshə′leɪʃən] *n* выдыхание
breathe [bri:ð] *v* дышать
pass [pɑ:s] *v* проходить
passage, passage-way [′pæsɪʤ], [′pæsɪʤweɪ] *n* проход, воздухоносный путь
windpipe [′wɪndpaɪp] *n* дыхательное горло
trachea [trə′kɪə] *n* трахея
bronchus [′brɔŋkəs] *(pl.* bronchi [′brɔŋkaɪ]) *n* бронх
bronchial [′brɔŋkɪəl] *a* бронхиальный
divide [dɪ′vaɪd] *v* делить
surround [sə′raund] *v* окружать
involve [ɪn′vɔlv] *v* вовлекать, затрагивать
involvement [ɪn′vɔlvmənt] *n* вовлечение

Упражнение 1. Прочтите следующие пары предложений и переведите их на русский язык.

1. We call three major types of blood vessels arteries, veins and capillaries. - Smaller branches of arteries are called arterioles. 2. The heart pumps the blood into the lung by circulatory system. - From the left heart the blood is pumped into the aorta. 3. Pulmonary artery divides into two branches. - The upper extremity is divided into the shoulder, the upper arm, the forearm and the hand. 4. The right carotid artery distributes blood to all parts of the right side of the neck, face, head and brain. - The blood from the aorta is distributed throughout the body.

Упражнение 2. Прочтите следующие предложения. Определите время и залог сказуемого. Переведите предложения.

1. These textbooks will be distributed among all the students of our group. 2. Harvey collected ideas of the circulation of blood which until then had been studied but not confirmed by experiments. 3. Lymph passes through the lymphatic glands which act as filters and keep back any poisonous material, such as germs that has been brought to them in the lymph. 4. Those who have been in close contact with the infected patients must be quarantined for a time. 5. The heart

muscle is nourished by coronary arteries. 6. When the left ventricle is contracting its contained blood is being forced into the aortic artery.

Упражнение 3. Переведите предложения. Определите какую функцию выполняет слово **one (ones).**

1. There are four chambers in the heart: two smaller ones, the auricles, and two larger ones, the ventricles. 2. One often describes the heart as consisting of a base and an apex. 3. Harvey showed that there was a double channel: in one set of vessels - the arteries, away from the heart; in another set - the veins to the heart. 4. One must remember that air is at all times full of bacteria.

Упражнение 4. Прочтите следующие предложения. Замените выделенные существительные словами-заменителями **one (ones).** Переведите предложения.

1. Here are some books, which *book* do you want? 2. This text is very difficult to translate without a dictionary; give me another *text.* 3. My watch is not working well. I must buy a new *watch.* 4. These exercises are much easier than the *exercises* we translated at the last lesson.

Упражнение 5. Переведите следующие словосочетания. Назовите суще- ствительные, выполняющие функцию (левого) определения.

blood circulation, one-way valve, cone-shaped organ, striated muscle tissue, smooth muscle cells, heart valves action, heart beat rate, tissue oxygen supply, heart blood output

Упражнение 6. Переведите предложения, содержащие группы существи- тельных. Помните, что основное слово стоит последним в ряду слов и перед ним нет ни артикля, ни предлога.

1. The blood-pressure measurement method is very simple. 2. The heart wall is composed of two layers. 3. The arterioles divide into smaller tissue capillaries which are near the body cells. 4. In this picture you can see the blood vessel size differences. 5. Smooth muscle tissue predominates in the small arteries and elastic tissue - in the large arteries.

Упражнение 7. Прочтите следующие слова. Переведите их.

carbon dioxide [ˈkɑːbən daɪˈɔksaɪd], waste products [ˈweɪst ˈprɔdəkts], nitrogen [ˈnaɪtrəʤən], cilium [ˈsɪlɪəm] *(pl.* cilia [ˈsɪlɪə]), nasapharynx [neɪzəˈfærɪŋks], sinuses [ˈsaɪnəsɪz], pleura [ˈpluərə]

Упражнение 8. Напишите данные слова в 3 столбика в соответствии с чтением суффикса **-ed** как [t], [d], [id] и переведите их.

removed, exhaled, distinguished, involved, inhaled, circulated, diffused, breathed, called, produced, included, provided, connected

Упражнение 9. Отработайте чтение 4-го абзаца текста А.

Упражнение 10. Познакомьтесь с разными значениями суффикса **-ing.** Переведите производные слова.

1. глагол + **-ing** = существительное: to read *читать* - reading *чтение.*

feeling, breathing, functioning (of the system), (the) sustaining (of life)

2. **-ing** - встречается в прилагательных, развившихся из причастий настоящего времени: healing *целебный.*

striking, stunning, demanding, misleading, understanding

Упражнение 11. Прочтите и переведите данные гнезда слов.

1. to respire, respiration, expiration, inspiration, respiratory, inspiratory; 2. to produce, product, production, productive, producing; 3. to in-

hale, inhalation, to exhale, exhaled, exhaling; 4. breath, to breathe, breathing, breathless, breathlessness; 5. to pass, passage, passing, passage-way.

Упражнение 12. Переведите следующие словосочетания.

expiratory centre, respiratory mechanism, waste product, metabolic product, the air conducting passage-ways, to inhale (breathe in) oxygen, to exhale carbon dioxide, surrounding tissues

Упражнение 13. Прочтите данные группы слов и переведите их.

1. through, throughout, though, although; 2. case, cause, course; 3. some, same, sum; 4. since, science

Упражнение 14. Просмотрите текст А. Назовите тему и основные положения текста.

Text A

The respiratory system

1. Respiration occurs in all living things, both plants and animals.The proper function of this system is perhaps the most important one in the sustaining of life. Interruption of breathing for only a few minutes by suffocation or strangulation causes death. In the human organism, respiration consists of those processes by which the body cells and tissues make use of oxygen and by which carbon dioxide or the waste products of respiration are removed.

2. Inhaled air contains about 20 per cent oxygen and four hundredths of one per cent carbon dioxide. Exhaled air consists of approximately 16 per cent oxygen and 4 per cent carbon dioxide. Nitrogen, which makes up about 79 per cent of the atmosphere, is not involved in the breathing process. When air is inhaled into the lungs, a portion of the oxygen is passing into the blood and is being circulated through the body. At the same time, carbon dioxide is being diffused out of the blood into the lungs and exhaled.

3. Air is breathed through either the mouth or nose into the oral cavity, or pharynx. It then passes through the voice box, or larynx, into the windpipe, or trachea. The trachea ultimately divides into two smaller tubes, bronchi, one is going to each lung. The bronchi divide into tiny passage-ways that are named bronchioles, which lead directly to minute air sacs, or alveoli. The exchange of life-giving gases is effected through the walls of the alveoli.

4.One must know that mechanisms in the 'upper res'piratory /tract 'serve to 'filter, and warm the 'air in its 'journey to the \ lungs. | J The 'hairs, or 'cilia, in the nostrils partially 'filter out 'dust particles as does 'sticky se'cretion, 'mucus, which has been pro'duced by 'mucous /cells. | It lines the /mouth, 'nasal /passages, | /pharynx | and \trachea. | | 'Cilia in the 'nasal 'passages and /trachea | are effective in helping to re'move 'foreign /particles | from the 'upper res'piratory \ tract.

5. Other structures which are connected with the system include: the laryngeal tonsils, which are masses of tissue in the nasopharynx or posterior portions of the nasal passages (adenoids are infected or diseased laryngeal tonsils); the sinuses, cavities in the bones in the front part of the

skull that provide resonance to the voice, and the pleura, a doublewalled membrane which surrounds the lungs.

6. When the diaphragm contracts and flattens, it contributes to the extension of the vertical diameter of the

thoracic cavity. Air is constantly renewing in the lungs. The capacity of the air passages is increasing. Any muscular effort, e.g. even standing up, increases the number of respirations.

Упражнение 15. 1) Прочтите и переведите текст А. Абзацы 5 и 6 переведите письменно. 2) Найдите в тексте А ответы на следующие вопросы и зачитайте их.

1. What gases are involved in breathing? 2. What parts of the respiratory system does the air pass on its way to the alveoli? 3. What are the other structures connected with the system? 4. Does the diaphragm contribute to the extension of the vertical diameter of the thoracic

cavity? 5. Any muscular effort increases the number of respirations, doesn't it?

3) Составьте план текста А.

Упражнение 16. Подберите к латинским словам английские эквиваленты.

trachea	voice box
cilium	hair
pharynx	oral cavity
larynx	windpipe

Упражнение 17. Подберите пары синонимов

to consist of, to take part in, fine, air passage, to occur, respiratory tract, to happen, minute, to be involved in, to be made of

Упражнение 18. Образуйте пары антонимов к данным словам, используя приставку ex-, и переведите их.

to inhale, inspiration, to include

Упражнение 19. Образуйте форму множественного числа от данных латинских слов.

trachea, broncus, alveolus, cilium, pleura

Упражнение 20. Выберите верный перевод выделенных слов.

1. Each lung is surrounded by a double-folded membrane, the pleura. (окружает, окружило, окружено) 2. The tonsils are located in the oropharynx. (были расположены, расположат, расположены) 3. Numerous questions were being discussed at the lesson. (обсуждались, обсуждают, будут обсуждены) 4. The concept of respiration was based directly upon the work of Lavoisier. (была основана, основывают, основана) 5. The total number of alveoli in the lung has been estimated as 750 millions. (насчитывают, насчитали, насчитал)

Упражнение 21. Переведите следующие предложения. Запомните перевод данных глаголов, требующих после себя определенных предлогов.

to refer to, to speak of, to take care of, to send for, to wait for, to think of

1. Respiration is usually thought of as the mechanical process of breathing. 2. Disease germs are sometimes referred to as bugs. 3. Those patients have been taken care of by the nurses. 4. By the discovery of tubercule bacillus Robert Koch had been already much spoken about. 5. This lecture has long been waited for.

Упражнение 22. Переведите предложения, используя разные способы перевода страдательного залога.

1. During the experiment all the work was being done automatically. 2. The lungs are separated from other organs of the body in a movable rigid-box - the chest cavity. 3. The boy with pneumonia was given necessary treatment. 4. In this journal, the method of examination of bronchi has been spoken of. 5. Air is breathed into the lungs 20 times a minute all our lives. 6. Foreign substances in the blood stream are known as emboli.

Упражнение 23. Переведите предложения, определите, где слово one не переводится.

1. One must consider respiration essentially as exchange of gases - one in the lungs and one in the tissues. 2. Pneumonia may be caused by one of the different kinds of bacteria (germs), pneumococcus. 3. The thoracic cavity that consists of ribs and muscles is the one for heart, lungs and other viscera. 4. The lungs are built of alveoli and through the bronchi, larynx, pharynx, mouth cavity and nasal one they expire carbon dioxide (CO_2) and inspire oxygen. 5. In the cross-sections one can see how the lungs are separated from the chest wall by the pleura.

Упражнение 24. Переведите следующие словосочетания.

1. life-giving gas, life-giving gas exchange; 2. tissue masses, tissue masses structures; 3. respiration waste products, respiration waste products removal; 4. carbon dioxide, carbon dioxide exhalation; 5. doublewalled membrane, double-walled lung membrane; 6. blood capillaries, blood capillaries dense network; 7. thoracic cavity volume, thoracic cavity volume increase; 8. body cell oxygen, body cell oxygen supply.

Упражнение 25. Переведите на английский язык.

1.Дыхание свойственно всему живому - как животным, так и растениям. 2. В процессе дыхания ткани поглощают кислород, а углекислый газ выводится из организма. 3. Воздух, который мы вдыхаем, содержит около 20% кислорода. 4. Бронхи делятся на мелкие воздухоносные пути, называемые бронхиолами. 5. Прекращение дыхания даже на несколько минут приводит к смерти

Часть II

Слова к части II

exchange [ɪks'ʧeɪnʤ] *n* обмен; *v* обменивать(ся)
alveolus [æl'vɪələs] *(pl.* alveoli [æl'vɪəlaɪ]) *n* альвеола
alveolar [æl'vɪələ] *a* альвеолярный
dense [dens] *a* плотный
transverse ['trænzvə:s] a поперечный
flat *a* плоский
flatten ['flætn] *v* делать(ся) ровным, плоским
since [sɪns] *adv c* тех пор; *prp c* (какого-л. времени); *cj* так как, поскольку
content ['kɔntənt] *n* содержимое
eliminate [ɪ'lɪmɪneɪt] *v* выводить, удалять
elimination [ɪ lɪmɪ'neɪʃn] *n* выведение, удаление
contribute [kən'trɪbjut] *v* **(to)** содействовать, способствовать
through [θru:] *prep* сквозь, через

Упражнение 1. Прочтите и переведите следующие слова. Проверьте себя по словарю.

maximum, production, pleural, passively, position, elasticity, tract, pulmonary, ventilation

Упражнение 2. Подберите пары синонимов.

interior, per minute, to take place, because, to occur, since, internal, each minute, a minute

Упражнение 3. Образуйте от данных слов антонимы, используя приставки **ex-, un-, in-.**
interior, decrease, inspiratory, important

Упражнение 4. Прочтите и запомните перевод слов **rest, activity.**

rest 1. остаток: the rest of the students, the rest of blood, for the rest в остальном; 2. покой: at rest в состоянии покоя, a resthome дом отдыха

activity 1. *неисчисл.* деятельность: respiratory activity; активность: political activity of the masses; 2. *обычн. pl.* деятельность (вопред. области): his social (political) activities

Упражнение 5. Прочтите и запомните следующие устойчивые словосоче- тания с предлогом **at.**

at all вообще, совсем at rest в состоянии покоя at first сначала at times временами, иногда

at last наконец at the same time в то же самое время

at least no крайней (меньшей) мере

Упражнение 6. Просмотрите текст B (время 10 мин). 1) Скажите, на сколько частей можно разделить текст. 2) Найдите предложения, где употребля- ются: а) глаголы-сказуемые в **Passive Voice;** б) слово **one (ones);** в) существительные в функции определения. 3) Переведите эти предложения.

Text B

Respiration

The term «respiration» means the exchange of gases (oxygen and carbon dioxide) which takes place between the living organism and the environment. One must consider that in higher organisms this exchange takes place at several different levels. An initial exchange must occur between the air in the lungs, from which the oxygen is being continually taken up and into which carbon dioxide is being continually poured, and the external air. This is the process of external respiration.

The composition of the air inside the lungs is different from that of the air which we inhale. The content of alveolar air is very constant, especially the one of carbon dioxide, the partial pressure of which is normally 40 mm of mercury. This constancy is the result of a self-regulating mechanism by which the respiratory activity is governed by the amount of carbon dioxide which has been eliminated from the organism.

The exchange of gases varies according to the size and activity of the organism. In man at rest the absorption of oxygen reaches about 0.25 litre a minute and the elimination of carbon dioxide 0.2 litre. At a time of maximum muscular activity, the consumption of oxygen and the production of carbon dioxide may both exceed 4 litres a minute.

The movement of air into the lungs is brought about by an increase in the volume of the thoracic cavity with the action of the respiratory muscles. The lungs follow this movement passively. Some of the inspiratory muscles have a fixed point on the ribs; when the ribs are being raised the muscles increase the anteroposterior and transverse diameters of the thoracic cavity (costal respiration). Another important muscle is the diaphragm, a thin dome-shaped «sheet», which closes the lower part of the thorax and separates it from the abdomen. The diaphragm contracts and flattens; it contributes in this way to the extension of the vertical diameter of the thoracic cavity and raises the ribs (abdominal respiration). At the time of expiration, the thorax returns to its initial position, and air is expelled through the same tracts that had been used by fresh air during inspiration.

In an individual at rest the number of inspirations per minute is 10 to 15; the pulmonary ventilation, or the volume of air which passes through the respiratory system each minute, is about 6 litres per minute. During intense muscular activity the inspiration rate may rise to 50 and the ventilation to 150 litres or more per minute.

Упражнение 8. Прочтите данные суждения. Найдите в тексте предложения, более полно выражающие мысль этих суждений.

1. The term «respiration» means the exchange of gases. 2. An initial exchange between the air in the lungs and the external air is called external respiration. 3. The exchange of gases varies according to the size and activity of the organism. 4. The content of alveolar air is very constant. 5. The diaphragm contracts and flattens.

Часть III

Упражнение 1. Переведите предложения с глаголом-сказуемым в страда- тельном залоге.

1. Oxygen is being continually taken up from the lungs. 2. The exchange of gases varies according to the size and activity of the organism.

3. Some of the respiratory muscles have a fixed point on the ribs. 4. Air is expelled through the tracts that have been used by fresh air during inspiration. 5. The heart wall is composed of two layers.

(Ответ: 1, 4, 5. Если вы ошиблись, повторите ? 14 Грамматического справочника.)

Упражнение 2. Прочтите предложения, где слово **one** - числительное. Переведите эти предложения.

1. The lungs are two in number and one of them is in the right half of the thoracic cavity. 2. One must know that smoking is harmful. 3. The right lung is separated from the left one by the mediastinal septum.

4. There is one movable bone in the skull. 5. The right and left pleural cavities are serous sacs with visceral layers and parietal ones.

(Ответ: 1, 4. Если вы ошиблись, повторите ? 36 Грамматического справочника.)

Упражнение 3. Опишите органы дыхания, используя рис. 4.

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.

- You home task is to learn new words translate and retell the text

Lesson 9

- **Topic of the lesson**: The digestive system
- **Objectives:** 1. to introduce students to new material
  2. to do exercises using some, any, no
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

The King would sing, about a ring that would go ding.

- **Teaching / learning activities**
  - **Instructions**

A

Some	**any**
Use some in positive sentences: • I am going to buy **some** clothes. • There's **some** ice in the fridge. • We did **some** exercises.	Use any in negative sentences. • I'm not going to buy **any** clothes. • There isn't **any** juice in the fridge. • We didn't do **any** exercises.

B

any and **some** in questions.

In most questions (but not all) we use **any**:

- Is there any ice in the fridge?
- Has he got any friends?
- Why didn't you buy any food?

We normally use some (not any) when we offer things (Would you like…?)

- A: Would you like some coffee?

B: Yes, please.

Or when we ask for things (Can I have…? etc):

- A: Can I have some soup, please?

B: Yes. Help yourself.

- A: Can you lend me some money?

B: Sure. How much do you need?

C some and any without a noun

- I didn't take any photographs but Ann took some. (= some photographs)
- You can have some coffee but I don't want any. (any coffee)
- I've just made some coffee. Would you like some?

D

Something / somebody (or somebody)	Anything / anybody (or anybody)
• She said something. • I saw somebody. • Would you like something to eat?	• She didn't say anything. • I didn't see anybody. • Are you doing anything this evening?

Not + any **no** **none**

A

The car park is empty.

There aren't **any** cars } **in the park**

There are **no** cars

How many cars are there in the car park? **None**.

not + any

- There aren't any cars in the car park.

no +noun (**no** cars / **no** garden etc.)

- There are **no** cars in the car park.

We use **no** … especially after **have (got)** and **there is / are**

negative verb + **any** = positive verb +**no**:

- They **haven't** got **any** children. or They've got **no** children.

(not They haven't got no children)

- There **isn't any** sugar in you coffee. or there's **no** sugar in your coffee.

B

no and non

use no + noun(**no money / no children** etc.)

- We've got **no money**.
- Everything was OK. There was **no problem**.

Use **none** alone (without a noun):

- 'How much money have you got?' '**None**'. (=no money)
- 'Where there any problems?' '**No**, **none**.' (= no problems)

C

none and **no-one**

none=0 (zero)

None is a answer for **How much? / How many?** (things or people)

- ‘How much money have you got?’ ‘**None.**’ (=no money)
- ‘How many people did you meet?’ ‘**None**.’ (=no people)

- **Practice**

- Now, will you give your own examples?
- Let’s do exercise. Open your books at the page 83

Часть I

Слова к части I

pelvis [ˊpelvɪs] *n* таз
pelvic [ˊpelvɪk] *a* тазовый
enclose [ɪnˊklouz] *v* заключать, окружать
support [səˊpɔ:t] *v* поддерживать
gall-bladder [ˊgɔ:lblædə] *n* желчный пузырь
stomach [ˊstʌmək] *n* желудок
weigh [weɪ] *v* взвешивать, весить
weight [weɪt] *n* вес
wide [waɪd] *a* широкий
widen [ˊwaɪd(ə)n] *v* расширять(ся)
width [wɪdθ] *n* ширина
long [lɔŋ] *a* длинный
length [leŋθ] *n* длина
lengthen [leŋθən] *v* удлинять(ся)
inch [ɪntʃ] *n* дюйм
narrow [ˊnærou] *a* узкий; *v* сужаться

Упражнения

Упражнение 1. Заполните пропуски неопределенными местоимениями **some, any, no** и их производными.

1. Are there ... grammar exercises in this textbook? 2. Give the patient ... analgetic. 3. Can ... show me the way to the Rectorate? 4. ... was allowed to visit the boy because of the quarantine. *5.* My eyeglasses are bad, I can't see ... now. 6. You may ask ... to help you.

Упражнение 2. Переведите следующие предложения с неопределенными местоимениями **some, any, no** и их производными.

1. The diseases of the respiratory system depend in some way on its anatomy and functions. 2. The laws of disease are as definite and wellknown as those of any other biological process. 3. The earliest symptoms of bronchitis must be known to everyone. 4. Anybody may catch a respiratory disease at some time or other. 5. No student has been absent from the lecture today.

Упражнение 3. В следующих предложениях определите придаточные предложения: определительные, дополнительные и обстоятельственные. Переведите предложения.

1. While oxygen is being taken into the blood, carbonic acid gas, or carbon dioxide passes from the blood into the lungs and is breathed out. 2. If you hold your breath, the carbon dioxide immediately begins to accumulate in the blood. 3. The tonsils can be removed in later life, provided the infection seems severe. 4. The right lung that is slightly larger of the two is divided into three lobes. 5. The teacher explains that the diaphragm contracts and descends with each inspiration. 6. When the lungs are full, the diaphragm relaxes.

Упражнение 4. Переведите предложения согласно образцу; обратите внимание на перевод местоимения **it.**

Образец: Water is liquid. Вода - жидкость.

It is necessary for life. Она необходима для жизни. It is necessary for health to drink distilled water. Для здоровья необходимо пить дистиллированную воду.

1. Medical students study anatomy. It is difficult for them. It is difficult for them to study it. 2. The amount of air which the body needs varies from time to time. It is necessary for the body. It is necessary for the body to regulate it. 3. Blood is a red fluid. It is easy to see it when it escapes from a blood vessel. 4. Pneumonia is inflammation of the lungs. It is dangerous for life. It is easy to diagnose it. 5. The larynx contains the vocal cords. It is surrounded by pieces of cartilage for support. It is possible to examine it with special instruments.

Упражнение 5. Переведите следующие предложения. Определите, в каких предложениях слово **it** не переводится.

1. It is possible to remove one lobe of the lung without any damage to the rest. 2. The upper part of the respiratory system conducts air and produces the voice; it consists of the nose, pharynx, larynx, trachea and bronchi. 3. It is known that internal respiration is the exchange of gases. 4. Cold on the surface of the body can change the amount of blood in the nose or lungs when it is needed there. 5. It is by means of the organs of respiration that air is taken into the lungs and oxygen is given to the blood.

Упражнение 6. Прочтите следующие слова. Переведите их.

chest [ʧest], abdomen [ˊæbdəmən], mechanical [mɪˊkænɪkəl], chemical [ˊkemɪkəl], diaphragm [ˊdaɪəfræm], muscle [ˊmʌsl], behind [bɪˊhaɪnd], to bind [baɪnd], liver [ˊlɪvə], across [əˊkrɔs], to participate [pɑːˊtɪsɪpeɪt], to situate [ˊsɪtjueɪt], substance [ˊsʌbstəns], reservoir [ˊrezəvwɑː], palate [ˊpælɪt], to consume [kənˊsjuːm], diameter [daɪˊæmɪtə]

Упражнение 7. Отработайте чтение следующих предложений:

The ˊabdomen is the ˊlargest ↗cavity... . It is bounded a↗bove..., it is sepa'rated by the ˊgreat ˊmuscle of respi↗ration... . ˊLaterally and in ↗front | it is en↗closed by the ˊlower ↗ribs | ... and be↗hind, | it is en'closed by the spinal ↘column.

Упражнение 8. Запомните значение суффикса **-ic.** Образуйте прилагательные от следующих существительных.

-ic (-ical) образует от основ существительных относительные прилагательные, которые обозначают принадлежность или признак: pelvis - pelvic; physiology - physiological, physiologic.

history, chemistry, mechanism, toxicity, spleen

Упражнение 9. Прочтите и переведите следующие гнезда слов.

1. to bound, boundless, boundary; 2. to weigh, weight, weighing, weighed; 3. wide, to widen, width, widely; 4. long, length, to lengthen

Упражнение 10. Прочтите и переведите следующие словосочетания.

pelvic girdle, specific (atomic, molecular) weight, to refer a patient to a specialist, reference book, a wide variety of

Упражнение 11. Просмотрите текст А и скажите, какие органы брюшной полости описаны в данном тексте.

Text A

The Abdomen

The abdomen is the largest cavity of the body. It is bounded above by the thorax or chest and below by two pelvic bones which meet in front. From the cavity of the thorax it is separated by

the great muscle of respiration - the diaphragm. Laterally and in front it is enclosed by the lower ribs and abdominal muscles. Behind, it is supported by the spinal column. The organs of the abdominal cavity are the liver, the gall-bladder, the stomach, the intestines, the pancreas, the spleen, the kidneys and the bladder.

The liver lies under the right ribs and extends across to the left of the epigastrium. The liver is a large organ that weighs about 1.5 kg. Everybody must know that the liver plays a very important role in the vital activities of the organism. It is the liver that secretes bile which participates in the digestive process and has a defensive function, i.e. some toxic substances are detoxified in the liver.

The gall-bladder lies beneath the right lobe of the liver. The gallbladder serves as a bile reservoir.

The stomach lies under the left ribs and extends across to the right. It is known that its smaller end situates in the epigastrium. The stomach serves as a container of food, which is partly digested in it. The size and shape of the stomach vary with any amount of food that is consumed and the extent of contraction of its wall. The stomach when it is filled with food is usually compared with a chemical retort. Its capacity is some 1-2 litres.

The intestines («internal» - Latin) occupy chiefly the central portions of the abdominal cavity. From the stomach the food passes in small portions into the small intestine where it undergoes further mechanical and chemical changes. As the contents of the small intestine cannot move back they may freely pass into the large intestine.

The «small» and «large» refers to the width, rather than the length. The small intestine is only 1.5 to 2 inches in diameter at the point where

it leaves the stomach and it narrows somewhat thereafter. The large intestine is up to 2.5 inches wide.

Упражнение 12. Прочтите и переведите письменно следующие предложе- ния из текста А.

1. The liver plays a very important part in the vital activity of the organism. It secretes bile which participates in the digestive process and has a defensive function, i.e. some toxic substances are detoxified in the liver. 2: From the stomach the food passes in small portions into the small intestine where it undergoes further mechanical and chemical changes.

3. The small intestine is only 1.5 to 2 inches in diameter at the point where it leaves the stomach and it narrows somewhat thereafter.

Упражнение 13. Прочтите и переведите текст А. Найдите в тексте ответы на следующие вопросы и зачитайте их.

1. Where is the largest cavity of the body situated? 2. What organs does the abdominal cavity contain? 3. What are the characteristics of the liver?

4. What does the gall-bladder serve for? 5. What are the characteristics of the stomach? 6. How do we distinguish «small» and «large» intestines?

Упражнение 14. Составьте план текста А.

Упражнение 15. Подберите пары синонимов.

spinal column, to participate, beneath, thorax, chest, under, to take part, backbone

Упражнение 16. Подберите пары антонимов.

above, in front of, small, lower, to the left, to pass in; upper (higher), to the right, to leave, behind, below, large

Упражнение 17. Переведите следующие предложения на русский язык. Оп- ределите тип придаточных предложений (см. ? 29 Грамматического справочника)

1. After the food leaves the stomach it is acted on by several digestive enzymes. 2. The stomach is a bag the walls of which are largely made up of involuntary or smooth muscle fibres. 3. The liver is a large and extremely important organ whose work is somewhat intermediate between digestion and nutrition. 4. The esophagus is a 9 to 10 inch muscular tube that extends from the pharynx to the stomach. 5. The food material which is taken into the mouth must be digested mechanically or chemically as it travels through the gastrointestinal tract.

Упражнение 18. Переведите следующие предложения. Определите функции слова **it** (см. ? 35 Грамматическогосправочника)

1. It must be noted that the role of the stomach is to prepare the food chemically and mechanically. 2. When a group of organs performs a varified series of functions we call it a system. 3. It is the gastric glands in the stomach that secrete gastric juice, which is acid and acts

on meals. 4. It is through the capillary network of the villi that digested foods pass to enter the bloodstream. 5. It is possible to refer painful intestines to bacterial or amoebic infection of the gastrointestinal tract. 6. After the food is properly prepared it is absorbed into the lymph vessels and blood vessels.

Упражнение 19. Переведите на английский язык.

1. Диафрагма - это большая мышца, которой грудная полость отделяется от брюшной. 2. Известно, что печень, расположенная в правом подреберье, является одним из самых крупных органов. Она выполняет несколько жизненно важных функций. 3. Именно в печени обезвреживаются некоторые токсичные вещества. 4. Толстый кишечник на 1-1,5 дюйма шире, чем тонкий.

Упражнение 20. Опишите органы пищеварения, используя рис. 5.

Часть II

Слова к части II

digest [dɪ′ʤest] *v* переваривать(ся)
digestion [dɪ′ʤestʃn] *n* пищеварение
digestive [dɪ′ʤestɪv] *a* пищеварительный
feature [′fi:tʃə] *n* черта
mucous [′mju:kəs] *a* слизистый
line [laɪn] *v* выстилать
lining [′laɪnɪŋ] *n* внутренняя оболочка
secrete [sɪ′kri:t] *v* секретировать, выделять
secretion [sɪ′kri:ʃn] *n* секреция
longitudinal [lɔnʤɪ′tju:dɪn(ə)l] *a* продольный
lack [læk] *v* нехватать, отсутствовать
juice [ʤu:s] *n* сок
saliva [sə′laɪvə] *n* слюна
salivary [′sælɪvərɪ] *a* слюнный
be situated [sɪtju:eɪtɪd] *v* быть расположенным
communicate [kə′mju:nɪkeɪt] *v* сообщаться

Упражнение 1. Образуйте от данных слов прилагательные, используя суффиксы **-al, -ive, -ous,** и переведите их.

abdomen, intestine, mucus, to digest, defence, fibre, chemistry, mechanic, serum

Упражнение 2. Прочтите и запомните перевод следующих слов и слово- сочетаний.

1. result [rɪ′zʌlt] *n* результат, исход, следствие; to obtain (to yield) good (bad) results получать (давать) хорошие (плохие) результаты; as a result of (operation, treatment, exercise) в результате (операции, лечения, нагрузки); *v* (in) давать в результате, приводить к...; to result from следовать, вытекать, явиться результатом

2. through [θru:] *prep* через, сквозь; из-за, благодаря, при помощи, посредством, путем; through the body, through the walls

Упражнение 3. Просмотрите текст В (10 мин). 1) Скажите, с точки зрения какой науки дается описание пищеварительной системы. 2) Найдите и переведите предложения, где употребляются: а) слово **«it»;** б) местоиме- ния **some, any;** в) слова **through, result.** 3) Найдите в тексте придаточные предложения и переведите их.

LESSON 10

Text B

The Digestive System

The digestive system consists of the digestive tract and digestive glands. The digestive tract is some 8-10 m long and is divided into the following parts: oral cavity, pharynx, oesophagus, stomach, small intestine and large intestine. The structures of the different parts of the tract have some special features.

The wall of the greater part of the digestive tract consists of three coats: internal - mucous, middle - muscular, and the external - serous. The mucous coat is lined with the epithelium outside which is a connective tissue with a thin layer of smooth muscle fibres. The mucous coat is pink in colour because it has many blood vessels. The numerous small glands in this coat secrete a viscous coat of the digestive tract. It facilitates the movement of food and protects the mucous coat from the damage by solid particles of food and various chemical substances. One must remember that the mucous coat of the digestive tract begins with the esophagus, contains lymph nodules which also have a protective function.

The greater part of the muscular coat of the digestive tract consists of two layers: an internal layer with circular muscle fibres and an external layer with longitudinal muscle fibres. The wall of the pharynx and the superior part of the esophagus, and the tongue and the soft palate all contain striated muscle tissue. It is the muscular coat of the other parts of the digestive tract that consists of smooth muscle tissue. Contractions of the muscular coat move food along the digestive tract.

The serous coat that covers the digestive organs in the abdominal cavity is called the peritoneum. The peritoneum has two layers, visceral and parietal. In the esophagus the serous layer is lacking and the outer coat is fibrous in nature.

The digestive glands secrete digestive juices that contain enzymes and some other substances which take part in the chemical processes of digestion.

In addition to the small glands in the mucous coat of the digestive tract, there are also large glands: the salivary glands, the liver and the pancreas. Though these glands are situated outside the digestive tract, they communicate with it through ducts.

Any part of the digestive tract and the digestive glands are equipped with nerve fibres and their endings. The nerves of the digestive glands regulate the secretion of digestive juices. It is known that the nervous system not only regulates the activity of each organ, but also coordinates their activities.

Упражнение 5. Прочтите каждое суждение. Найдите в тексте В предло- жения, более полно выражающие мысль данного суждения, и прочтите их.

1. The digestive tract is divided into some parts. 2. The viscous coat of the digestive tract facilitates the movement of food. 3. The muscles of different types form the walls of the intestine. 4. The serous coat doesn't cover all the organs of the digestive system. 5. Enzymes take part in digestion. 6. Salivary glands, liver and pancreas are situated outside the digestive tract. 7. The nervous system regulates and coordinates the work of the digestive organs.

Часть III

Упражнение 1. Найдите предложения с усилительной конструкцией **it is ... that** и переведите их.

1. It is known that the abdomen is the largest cavity of the body. 2. It is the liver that weighs about 1.5 kg. 3. It is essential to explain the anatomy of the digestive system. 4. It is the nervous system that regulates the activity of each organ. 5. It is the slippery mucus that protects the esophagus.

(Ответ: 2, 4, 5. Если вы ошиблись, повторите ?35 Грамматического справочника.)

Упражнение 2. Найдите и переведите предложения, в которых **any** имеет значение «любой».

1. Any lymph nodule of the mucous coat has a protective function. 2. Are there any blood vessels in the mucous coat? 3. Unlike the organs of the abdominal cavity the esophagus does not possess any serous layer.

4. Any digestive glands secrete digestive juices that contain special enzymes. 5. Are there any large glands in the digestive system?

(Ответ: 1, 4. Если вы ошиблись, повторите ? 7 Грамматического справочника.)

Упражнение 3. Найдите и переведите определительные придаточные пред- ложения.

1. The upper portion of the stomach which is called the fundus is at the top. 2. The stomach when it is full becomes pear-shaped. 3. The gastric juice is unusual for a body fluid as it is strongly acid. 4. The enzymes that the digestive juices contain take an active part in the process of digestion.

- 5. Nutrients are substances that help your body to grow and develop. **(Ответ:** 1, 4, 5. Если вы ошиблись, повторите ? 29 Грамматического справочника.) Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.

- You home task is to learn new words and retell the text

Lesson 11

- **Topic of the lesson**: The urinary system
- **Objectives:** 1. to introduce students to new words
  2. to do exercises on the text
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Sister Suzie sewing shirts for soldiers

Such skill as sewing shirts

Our shy young sister Suzie shows
Some soldiers send epistles
Say they'd rather sleep in thistles
Than the saucy, soft short shirts for soldiers Sister
Suzie sews.

- **Teaching / learning activities**
  - **Instructions**

THE URINARY SYSTEM

1. Эквиваленты модальных глаголов (? 17)

2. Употребление глагола в настоящем времени в значении будущего в условных и временных придаточных предложениях (? 30)

3. Функции и перевод слов **since, as** (?? 37, 38)

Часть I

Слова к части I

urine [ˈjuərɪn] *n* моча
urinary [ˈjuərɪnərɪ] a мочевой
urethra [juəˈriːθrə] *n* мочеиспускательный канал
ureter [juəˈriːtə] *n* мочеточник
excrete [eksˈkriːt] *v* выделять
excretion [eksˈkriːʃn] *n* выделение, отделение, экскреция
convey [kənˈveɪ] *v* передавать
lumbar [ˈlʌmbə] *a* поясничный
bean-shaped *a* бобовидной формы
fine [faɪn] *a* тонкий, мелкий
margin [ˈmɑːʤɪn] *n* край, полоса, грань
hilus [ˈhaɪləs] *n* ворота органа (например, легких)
apex [ˈeɪpeks] *n* верхушка
fundus [ˈfʌndəs] *n* дно органа
numerous [ˈnjuːmərəs] a многочисленный
straight [streɪt] *a* прямой
straighten [ˈstreɪtn] **out** *v* выпрямлять(ся), распрямлять(ся)

Упражнения

Упражнение 1. Напишите следующие предложения в а) **Past Indefinite;** б) **Future Indefinite** согласно образцу.

Образец: He *must* pass the examination in anatomy.

He *had to* pass the examination in anatomy.

He *will have to* pass the examination in anatomy. 1. The students may take all necessary textbooks from the Institute library. 2. He can help you with your translation. 3. You must repeat

the material of the lectures before the examination. 4. They cannot translate these articles without a dictionary.

Упражнение 2. Заполните пропуски модальными глаголами **can, may, must, should.**

1. In man, obstruction of the common duct ... produce abdominal symptoms and increase of serum amylase. 2. An ulcer ... occur only on an epithelial or mucosal surface. 3. Appendicitis ... be of different grades of intensity. 4. In an attack of acute appendicitis no food ... be taken by mouth and no water except in very small sips. 5. There was general agreement that the patient's diet ... be rich in protein and carbohy- drates, but poor in fat.

Упражнение 3. Замените в следующих предложениях модальные глаголы их эквивалентами.

1. The doctor says that you may walk. 2. The vitamins are substances which must be found in the diets of animals in order that they can utilize the organic foodstuffs to best advantage. 3. When the appetite is impaired and nausea and vomiting are common, meals must be small and be given at frequent intervals. 4. With the disappearance of symptoms the patient with infective hepatitis may leave his bed for purposes of toilet.

Упражнение 4. Переведите следующие предложения. Определите время глагола-сказуемого в главных и придаточных предложениях.

1. When dehydration occurs from excessive vomiting, parenteral feeding will be used.
2. If the diagnosis is correct, the patient will beproperly treated.
3. If coma develops, the patient will be transferred to hospital as soon as possible.
4. If some infectious fever is diagnosed, the patient is moved to the hospital in an ambulance.
5. If you hold your breath, carbon dioxide will immediately begin to accumulate in the blood.

Упражнение 5. Прочтите и переведите следующие предложения. Определите, какую функцию выполняет слово **as.**

1. In the process of metabolism certain waste products must be cast off as the body has no use for them. 2. The liver clears the body of bilirubin pigment which is produced as hemoglobin is broken down and red blood cells are destroyed. 3. Bile acts as an emulsifier, with detergent-like effect on the fats in the duodenum. 4. The pharynx serves as a passage-way for air from the nasal cavity to the larynx as well as for food. 5. As the man smells something he likes to eat, the gastric juice is poured out in large quantities.

Упражнение 6. Переведите следующие предложения. Определите, какую функцию выполняет слово **since.**

1. Since penicillin was discovered a vast amount of information has been accumulated concerning its use. 2. Senna is a favourite cathartic, since it can be made up into a sweet mass. 3. Since the liver of polikilothermic animals is less demanding than that of mammals, the liver of the frog is generally used for different kinds of investigations. 4. I have studied English since 2001.

Упражнение 7. Отработайте чтение следующих предложений.

The 'urinary 'system is the /system | which ex'cretes the 'largest 'part of the 'waste 'products of the \body. It con'sists of the /kidneys, | right and \left |, the /ureters |, a 'tube from 'each /kidney |, which con'veys the 'urine to the \ bladder, | the /urethra |, a 'tube | which leads from the /bladder |, along which the 'urine is 'passed 'out of the \body.

Упражнение 8. Запомните значение нижеприведенных суффиксов и пре- фиксов. Образуйте и переведите производные слова согласно модели.

1. **-ment** - образует существительные от глаголов: to move *двигаться)* - movement *движение.*

to nourish кормить, питать, to improve улучшать(ся), to develop развиваться)

2. a) **-en** - образует прилагательные от существительных, обозначающие материал: wood *дерево* - wooden *деревянный.* gold золото, wool шерсть, lead свинец

b) **-en** - образует глаголы от именных основ: deep *глубокий* -to deepen *углубляться).*

strength сила, moist влага, less меньше, straight прямой, length длина

Упражнение 9. Прочтите и переведите следующие гнезда слов.

1. excrete, secrete, excretion, secretion, excretory, secretory; 2. urine, urinary, urethra, ureter, urea; 3. pelvis, pelvic; 4. number, to number, numerous, numberless

Упражнение 10. Просмотрите текст А и скажите, какие части мочевой системы описаны в тексте.

Text A The Urinary System

1. The uriuary system is the system which excretes the largest part of the waste products of the body. It consists of the kidneys, right and left, the ureters, a tube from each kidney which conveys the urine to the bladder, the urethra, a tube that leads from the bladder, along which the urine is passed out of the body.

2. The kidneys («renes» - Latin) are placed one on each side in the lumbar region of the spine, on the posterior abdominal wall, at the level of the twelfth thoracic and first-second lumbar vertebrae. A kidney weighs about 150 grams and is covered by membranes. The connective tissue membrane which directly adheres to the kidney is called the fibrous capsule. This capsule is surrounded by perirenal fat and is called the adipose capsule. The kidneys are two bean-shaped organs. The kidneys contain one mil-

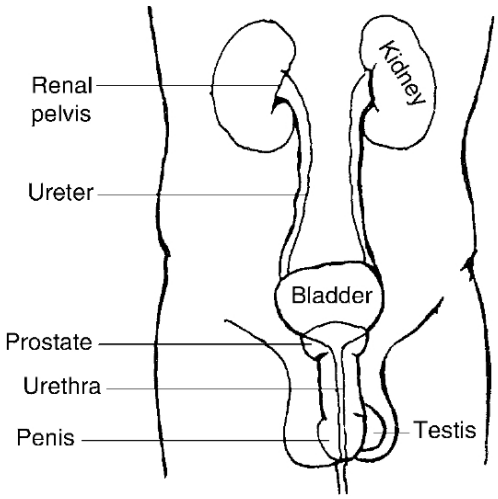

Fig. 6. The organs of the urinary system

lion small tubes, which have to excrete products of metabolism and control the concentrations of most of the constituents of body fluids. These small tubules make up the parenchyma of the kidney. They are very fine and may be of various shape. Since dissolved (растворенные) wastes may be excreted by diffusion through the various cell membranes there is little evidence that such excretion occurs.

3. The inner margin of the kidney is known as the hilus. At the hilus the ureter which conveys urine is a tube about 30 cm long. When the ureter leaves the hilus it descends along the posterior abdominal wall into the cavity of the pelvis where it perforates the wall of the bladder and opens into its cavity. As the muscular coat of the ureter contracts it has to perform peristaltic movements.

4. The bladder is a reservoir for urine. It is situated in the cavity of the pelvis. The bladder has three parts: the superior part or apex, the middle part or body, and the inferior part or fundus. The wall of the bladder consists of three coatings - mucous, muscular and connective tissue. The mucous membrane of the bladder forms numerous folds. If the bladder fills, the folds of the mucous coat will straighten out. The muscular coat consists of three layers of smooth muscles which are able to extend in different directions. It should be known that the capacity of the bladder of an adult is about 350-500 ml.

Упражнение 11. Прочтите и переведите текст А. Третий абзац переведите письменно.

Упражнение 12. Найдите в тексте А ответы на следующие вопросы и зачитайте их.

1. What are the parts of the urinary system? 2. Where are the kidneys placed? 3. What are the functions of the fine tubes which make up the parenchyma of the kidney? 4. What route does the ureter pass?

Упражнение 13. Составьте план текста А.

Упражнение 14. Подберите пары синонимов.

to consist of, to excrete, fine, capacity, fundus, volume, bottom, to be made up of, to pass out, minute

Упражнение 15. Подберите пары антонимов.

to ascend, large, the same, to discover, inferior, superior, to cover, small, various, to descend

Упражнение 16. Переведите предложения. Определите, какой частью речи являются выделенные слова. Найдите ихзначение в словаре.

1. The tubules which make up the parenchyma of the kidney are very *fine. 2.* The weather was *fine on* holidays. 3. *As* the bladder fills the folds of the mucous coat straighten out. 4. All higher animals have a backbone or vertebral column *as* it is called. 5. Smooth muscles form the muscular coat of internal organs *such as* esophagus, stomach and so on. They are also present *as* single cells or as cylindrical bundles of cells in the skin. 6. The muscular substance of the heart is known *as* myocardium.

Упражнение 17. Найдите модальные глаголы и их эквиваленты в следующих предложениях. Переведите предложения.

1. All nitrogenous waste products must be thrown off by the body first because they are useless, second because in some instances they are poisonous.

2. Many substances can affect the kidney epithelium so as to render it more or less reduced in ability to excrete urine. 3. Physiotherapeutic treatment of patients with chronic pyelonephritis should be advisable only in combination with medicamental therapy. 4. The kidney has to put back into the bloodstream all the materials that the body needs. 5. The process of filtration in the kidney is dependent upon the character of the membrane which may vary in permeability. 6. The effect of complex therapy in patients with chronic pyelonephritis may be only achieved when urodynamics is restored.

Упражнение 18. Переведите следующие предложения. Запомните значение слов **as, since.**

1. As the blood courses through the capillary glomeruli, the kidney cells take up water, salts and waste bodies. 2. Pathogenetic therapy includes such antiinflammatory preparations, as salicylates, dichlorophene, lydasa, aloe.

3. The wastes are substances which are taken in with the foods or as foods.

4. The phenomena of coagulation have received great attention from physiologists since the earliest times. 5. Since the arterioles of each renal artery are small, blood passes through them slowly, but constantly. 6. Since plasma sodium concentration remained unchanged, the experiments establish the ability of cadmium to increase tubular sodium reabsorption.

Упражнение 19. Переведите следующие предложения. Объясните, в каких случаях форма глагола-сказуемого в настоящем времени переводится будущим временем.

1. After the kidney cells remove the end products of food from the blood these substances are washed out of the tubules into the pelvis of

the kidney down the ureter into the bladder. 2. When the man smells something that he likes to eat, the gastric juice will be poured out in large quantities. 3. If the kidney is diseased and cannot excrete urine, the amount of urea in the blood is increased. 4. When no nerve impulses go to the heart-muscle, it will not beat regularly and rhythmically. 5. When the sympathetic nerve in the neck of a rabbit is cut, the blood vessels in the ear on that side become very much dilated.

Упражнение 20. Переведите на английский язык.

1. Большая часть продуктов распада выгаодится из организма почками. 2. Паренхима почки состоит из 1 000 000 маленьких трубочек, которые могут быть различной формы. 3. По мере того как мочевой пузырь наполняется, складки слизистой оболочки расправляются. 4. Емкость мочевого пузыря составляет в среднем 350-500 мл.

Упражнение 21. Назовите органы мочевыделительной системы, используя рис. 6.

~~Часть II~~ Слова к части II

quantity [ˈkwɔntɪtɪ] *n* количество
fat [fæt] *n* жир
concave [ˈkɔnkeɪv] *a* вогнутый, впалый
extend [ɪksˈtend] *v* вытягивать, растягивать, расширять, распространять
extension [ɪksˈtenʃn] *n* вытяжение, растяжение, распространение
knot [nɔt] *n* узел
surface [ˈsə:fɪs] *n* поверхность
convex [ˈkɔnvəks] *a* выпуклый, выгнутый
glomerulus [glɔˈmerulәs] (*pl.* **glomeruli** [glɔˈmerulaɪ]) *n* клубочек
unit [ˈju:nɪt] *n* единица
solid [ˈsɔlɪd] *n* твердое тело; *a* твердый
urea [ˈju:ərɪə] *n* мочевина
poison [ˈpɔɪzn] *v* отравлять; *n* яд

Упражнения

Упражнение 1. Подберите пары синонимов.

waste products, much, amount, stop, also, a good deal, cease, waste matters, too, quantity

Упражнение 2. Подберите пары антонимов.

large, to join, concave, inner, outwards, to separate, outer, convex, inwards, minute

Упражнение 3. Переведите следующие предложения. Запомните значение слов **certain, cause, to regard.**

1. The chief function of the kidneys is to separate fluid and certain solids from the blood. 2. The kidneys may be regarded as filters through which the whole blood of the body passes, and which remove from the blood a substance that is called urea together with other impurities. 3. If the kidneys cease to work from any cause, the blood will become poisonous.

LESSON 12

Упражнение 4. Прочтите текст В (10 мин). 1) Скажите, на сколько частей можно разделить текст и какова тема каждой из них. 2) Найдите предло- жения, где: а) даны эквиваленты модальных глаголов; б) слова **since, as;** в) глагол-сказуемое в придаточных времени и условия употребляется в форме настоящего времени, которая переводится будущим временем. 3) Переведите предложения.

Text B The Kidneys

Kidneys are a pair of glands which are situated close to the spine in the upper part of the abdomen. They are on a level with the last dorsal and upper two lumbar vertebrae. They are kept in this position by a quantity of fat, loose connective tissue, in which they are embedded, and the large vessels which have to supply them with blood.

Structure. In size each kidney is about 4 inches long, 2.5 inches wide, 1.5 inches thick, and weighs over 4 ounces. The size, however, may vary a good deal. The left kidney is slightly longer and narrower, and lies a little higher in the abdomen than the right.

Since the outer margin of the kidney is convex, the inner is concave. It presents a deep depression, which is known as the hilus, where the vessels enter its substance. At the hilus the renal vein lies in front of the renal artery, the former joins the inferior vena cava, and the latter springs from the aorta almost at a right angle.

Vertical section through a kidney allows to disclose three concentric zones. The outer light-coloured zone is the renal cortex, within this is the darker renal medulla and within this again is a space - the renal sinus which is normally occupied by fibrous sac, the renal pelvis. The cortex extends inwards in a series of renal columns which divide the medulla into a number of renal pyramids.

Within the cortex each minute artery presents a vascular knot, a glomerulus. Each glomerulus projects into the end of its corresponding renal tubule, which is separated by a thin layer of cells, glomerular (Bowman's) capsule;

glomerulus plus capsule forms a renal (Malpighian) corpuscle. A renal corpuscle with tubules and blood vessels is called a renal unit, or nephron.

Function. One chief function of the kidneys is to separate fluid and certain solids form the blood. The glomeruli are to filter from the blood the non-protein portion of the plasma. It is estimated

that in 24 hours the total human glomeruli will be able to filter between 150 and 200 litres, 99 per cent of which is reabsorbed by the tubules.

The kidneys are to be regarded as filters through which the whole blood of the body passes and which remove from the blood a substance, urea, together with other impurities, which together constitute the urine. The cleansed blood passes on in its vessels, and the urine drains into the ureters and finally into the bladder. If the kidneys cease to work the blood will become poisonous because of the accumulation of the waste matters.

Упражнение 5. Прочтите каждое суждение. Найдите в тексте предложе- ния, более полно выражающие мысль данных суждений, и прочтите их.

1. Kidneys are situated close to the spine. 2. The vessels enter the substance of the kidney at the hilus. 3. The renal cortex, renal medulla and renal sinus are three concentric zones of the kidney. 4. The kidneys may be regarded as filters.

Часть III

Контрольно-обобщающие упражнения к уроку 6

Упражнение 1. Найдите и переведите предложения, где сказуемое стоит в прошедшем времени.

1. The renal blood vessels can be constricted or dilated. 2. The patient was allowed to take this analgetic. 3. The boy will be able to walk by himself. 4. The inflow of blood had to be diminished when the renal blood vessels were constricted.

(Ответ: 2, 4. Если вы ошиблись, повторите ? 17 Грамматического справочника.)

Упражнение 2. Найдите и переведите предложения, где глагол **to have** выражает долженствование.

1. The bowels have the function to secrete the end products of digestion. 2. The lungs have to excrete carbon dioxide and water. 3. The

boy has been recently examined in a surgical department for intestinal pains. 4. Carbon dioxide is a gas which has to be eliminated from the body.

(Ответ: 2, 4. Если вы ошиблись, повторите ? 17 Грамматического справочника.)

Упражнение 3. Найдите и переведите предложения, где выделенные гла- голы-сказуемые переводятся будущим временем.

1. When a person *suffers* from a severe pain he has to consult a doctor.
2. If there *is* any disfunction of the kidney, it will affect the process of urine formation.
3. When the renal blood vessels *are dilated,* the inflow of blood will increase.
4. If the renal blood vessels *are constricted,* less urine will be formed.

(Ответ: 2, 3, 4. Если вы ошиблись, повторите ? 30 Грамматического справочника.)

Упражнение 4. Найдите и переведите предложения, где **as** и **since** являются союзами.

1. Waste products such as products of albuminous nutrition are excreted by the kidneys. 2. Since water is taken into the body, some of it is excreted through the lungs and perspiration. 3. The kidneys contain a large number of nerve fibres as their work is regulated by the nervous system. 4. As the renal blood vessels are dilated, the urine formation is changed. 5. Since last week there was no protein or sugar in the urine analysis. 6. Some waste materials are carried to the bladder and excreted as urine.

(Ответ: 2, 3, 4. Если вы ошиблись, повторите ?? 37, 38 Грамматического справочника.

- Conclusion

  - What was you home task for today?
    Who is ready? Come to the blackboard

  - Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.

  - You home task is to do exercise 4 at the page 100 and learn the new words at the page 91,97

The lesson is over good bye!

Lesson 13

- **Topic of the lesson**: Blood.Circulation.
- **Objectives:** 1. to give instructions and explain the differences of tenses. using the words after, before.
  2. to do practical exercises

3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

I am a mother pheasant pluckier,
I pluck mother pheasants.
I am the best mother pheasant pluckier,
That ever plucked a mother pheasant!

- **Teaching / learning activities**
  - **Instructions**
- **Practice**

BLOOD. CIRCULATION

1. Причастия I и II в функции определения (?? 20, 21)

2. Согласование времен (? 18)

3. Функции слов **after, before** (? 37)

Часть I Слова к части I

stain [steɪn] *v* окрашивать; *n* пятно
leucocyte [ˈljuːkəsaɪt] *n* лейкоцит
lymphocyte [ˈlɪmfəsaɪt] *n* лимфоцит
major [ˈmeɪʤə] *a* большой, более важный
majority [məˈʤɔrɪtɪ] *n* большинство
dye [daɪ] *n* краситель; *v* красить
wound [wund] *n* рана
attract [əˈtrækt] *v* привлекать, притягивать
phagocyte [ˈfægəsaɪt] *n* фагоцит
phagocytosis [ˌfægəsaɪˈtousɪs] *n* фагоцитоз
node [noud] *n* узел
neutrophil [ˈnjuːtrəfɪl] *n* нейтрофил
increase [ɪnˈkriːs] *v* усиливать(ся), увеличиваться); [ˈɪnkriːs] *n* возрастание, увеличение
invade [ɪnˈveɪd] *v* вторгаться
lobe [loub] *n* доля
nucleus [ˈnjuːklɪəs] (*pl.* **nuclei** [ˈnjuːklɪaɪ]) *n* ядро
succeed [səkˈsiːd] *v* следовать за чем-л.; преуспевать
success [səkˈses] *n* успех
successive [səkˈsesɪv] *a* последовательный, следующий один за другим
thus [ðʌs] *adv* так, таким образом
trap [træp] *v* захватывать

Упражнения

Упражнение 1. Найдите в следующих сочетаниях слов формы причастий I и II. Переведите их.

a) the urinary system consisting of two kidneys; the ureters conducting the urine from the kidneys; a tube leading from the bladder; tubules making up the parenchyma of the kidneys

b) a thin capillary network called glomerulus; urea dissolved in water; blood vessels straped like a ball

Упражнение 2. Раскройте скобки, используя причастия I и II. Переведите данные предложения.

1. The system (вьгаодящая) the largest part of the waste products of the body is called the urinary system. 2. The capsule (окруженная) by perirenal fat is called the adipose capsule. 3. The urethra is a tube (ведущая) from the bladder. 4. Each renal artery branches into many small arteries (которые называют) arterioles. 5. Ureters are muscular tubes (выстланные) with mucous membrane. 6. The agents (увеличивающие) the resistance of the organism to an inflammatory process are: rational diet, balneoand vitaminotherapy as well as immunotherapy.

Упражнение 3. Сравните следующие предложения. Объясните употребление правила.

1. She thinks she will pass her winShe thought she would pass her ter exams successfully. winter exams successfully.

2. We know the urinary system We knew the urinary system conconsists of two kidneys, ureters, sisted of two kidneys, ureters, the the bladder and the urethra. bladder and the urethra.

3. The doctor says that in this case The doctor said in that case the the operation on the right kid- operation on the right kidney was ney is necessary. necessary.

4. The patient asks whether stones The patient asked whether stones in the kidneys (or in the bladder) in the kidneys (or in the bladder) are a very common condition. were a very common condition.

Упражнение 4. Определите, в каких предложениях прошедшее время глагола-сказуемого переводится настоящим временем. Переведите данные пред- ложения.

1. It was found that after ligation of the common duct in dogs a rise in the bilirubin concentration of the blood did not occur. 2. The patient said that he felt better. 3. Many authors stated that the

new methods of treatment of gastric ulcer had been used successfully. 4. It was proved that saliva varied according to metabolic status and changes in diet. 5. Mechnikov thought that the extreme age attained by Bulgarian peasants resulted from the use of sour goat milk and the growth in the colon of the milk-souring bacterium «Bacillus bulgaricus». 6. Galen thought that the heart was the source of the body's heat.

Упражнение 5. Прочтите и переведите предложения со словами **after, before.**

1. Will you return your textbooks to the library before your examinations start? 2. The animal died on the 3rd day after inoculation. 3. The patient felt bad before the operation on his kidney. 4. The blood after circulation in the glomerulus emerges into capillaries on the walls of the uriniferous tubes.

5. He never met the man before. 6. After the food leaves the stomach it is acted on by several digestive enzymes.

Упражнение 6. Прочтите и переведите следующие слова.

protoplasm [ˊproutəplæzm], neutral [ˊnju:tr(ə)l], eosinophil [ˌi:ɔˊsınɔfıl], primarily [ˊpraımərılı], to pierce [pıəs], chemotaxis [ˌkemə(u)ˊtæksız], throughout [θru(:)ˊaut]

Упражнение 7. Запомните значение нижеприведенных суффиксов. Про- чтите и переведите следующие слова.

1. Глагол + **-er** = существительное, обозначающее а) деятеля; б) аппарат: to write *писать* - writer *писатель.*

a) to teach - teacher, to observe - observer, to invade - invader;

b) to intensify - intensifier, to amplify - amplifier, to magnify - magnifier

2. Глагол + **-ment** = существительное, обозначающее действие, состояние, результат действия: to move *двигаться* - movement *движение.*

to improve - improvement, to involve - involvement, to manage - management

Упражнение 8. Прочтите и переведите следующие гнезда слов.

1. (to) increase, increasing, increased; 2. to invade, invader, invading; 3. (to) wound, wounded; 4. to succeed, success, successive, succession, successively; 5. to attract, attraction, attractive; 6. (to) dye, dyeing, dyed; 7. (to) stain, stained, staining, stainless

LESSON 14

Text A

Leucocytes and Lymphocytes

1. *Leucocytes.* About 65 per cent of all white cells are leucocytes. Their protoplasm contains granules. Those leucocytes that stain neutral dyes - as the majority do - are called neutrophils. About 1.5 per cent of the total stain with acid dyes and are called eosinophils. And a still smaller number, 0.5 per cent, have granules that stain with basic dyes; these are called basophils. The percentage of oesinophils increases greatly when parasites invade the body.

2. One characteristic of leucocytes is the irregular, or lobed, appearance of the nucleus. The number of lobes is an index to the cell's age. Ordinarily, about 45 per cent of all leucocytes have a nucleus of three lobes. The life span[1] of a leucocyte is short, from four to twelve days.

3. The function of leucocytes is primarily that of protection against infection. After the skin is pierced and the wound becomes infected, leucocytes from all the body are attracted to this place. Just what attracts them is not known - the process is called chemotaxis - probably some by-product of bacterial metabolism. When they arrive at the wound, they leave the blood stream. They wage war on the invaders, engulfing the bacteria within their own protoplasm, a process called phagocytosis (literally «cell-eating»). Before the infection is not too overwhelming, the victory usually goes to the leucocytes.

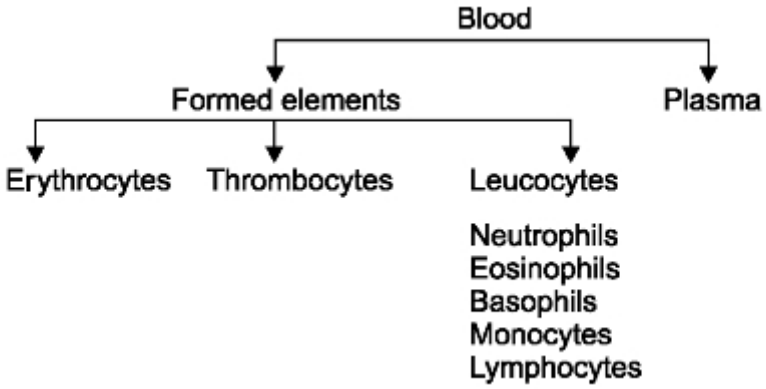

Fig. 7. The formed elements of blood.

4. *Lymphocytes.* These cells, which comprise about 35 per cent of the white cells, have a nucleus which practically fills the cell. They are produced in lymph nodes scattered throughout the body; the tonsils are examples of lymph nodes. They live only a few hours after they leave the blood stream. They are incapable of movement and thus cannot pursue bacteria and have little cytoplasm so that phagocytosis is practically out of the question. Bacteria trapped in lymph nodes provoke the formation of them. Unfortunately if the infection is overwhelming, the lymph nodes themselves become infected. Thus in guinea pigs it has been possible to trace the route of tubercle bacilli from the intestines to the lungs, as the route is marked by successively infected lymph nodes.

Notes

1. life span продолжительность жизни

Упражнение 10. 1) Прочтите и переведите текст А. Абзац 3 переведите письменно. 2) Найдите в тексте А ответы наследующие вопросы.

1. What is the difference between neutrophils, basophils and eosinophils? 2. When does the percentage of eosinophils increase? 3. The process of chemotaxis means «cell-eating», doesn't it? 4. What stimulates the formation of lymphocytes? 5. When do the lymph nodes become infected? 6. What kind of experiment is performed to prove this statement?

Упражнение 11. Подберите пары синонимов.

ordinarily, primarily, to consist of, all over, about, chiefly, throughout, usually, approximately, to comprise

Упражнение 12. Подберите пары антонимов.

regular, to arrive, usually, fortunately, to leave, irregular, unfortunately, unusually

Упражнение 13. Переведите следующие предложения с причастиями I и II.

1. One of the most important functions served by blood cells is the ingestion of foreign particles.
2. The blood is not the only fluid transporting material to different parts of the body.
3. The blood plasma contains among other things a soluble protein known as fibrinogen.
4. Blood and lymph are composed of cells dispended and carried within a watery fluid. 5. Leucocytes are divided into two major types: granulocytes, containing large granules in their cytoplasm and granulocytes lacking granules in their cytoplasm.

Упражнение 14. Переведите следующие предложения. Определите, в каких предложениях используются правила согласования времен.

1. Galen thought that the heart was the source of the body's heat and that the blood was the oil which fed the flame. 2. It was established that the exact form of the corpuscle was dependent upon the osmotic pressure of the fluid in which it is immersed for examination. 3. Fry considered that the blood platelets in man arose from the erythrocytes. 4. It has been commonly stated that the hemoglobin served as the carrier of oxygen. 5. It was demonstrated that rhythmic contractions would not continue long when sodium chloride was absent.

Упражнение 15. Переведите следующие предложения, определите функции слов **after, before.**

1. Anaemia is a medical condition which occurs after the reduction in the number of erythrocytes or amount of hemoglobin in the circulating blood. 2. Reticulocytes contain hemoglobin and after they are stained with a dye, their cytoplasm reveals a dense network of granules. 3. The granules in the eosinophils turn red, or a rosy colour, after the addition of an acid dye. 4. Neutrophils increase in number after pyrogenic (fever-producing) infections and in certain forms of leukemia.

5. It is known that the heart is beating in the embryo before it is supplied with nerves and it will continue to beat in experimental animals even if the nerve supply is cut. 6. In fish embryos the heart begins its rhythmic movement, presumably, before any connection of nervous elements of the heart musculature has been established.

Упражнение 16. Переведите на английский язык.

1. Лейкоциты составляют около 65% всех белых клеток. 2. Около 45% лейкоцитов имеют ядра, состоящие из трех долек. 3. Лим- фоциты составляют около 35% белых клеток. 4. Они вырабатываются в лимфатических узлах, разбросанных по всему телу.

Упражнение 18. Опишите форменные элементы крови, используя рис. 7.

Часть II Слова к части II

beat [bi:t] *v* бить; *n* удар; **beating** [ˈbi:tɪŋ] *n* биение
relax [rɪˈlæks] *v* расслабляться
relaxation [ˌri:lækˈseɪʃn] *n* расслабление
property [ˈprɔpətɪ] *n* свойство
respond [rɪsˈpɔnd] *v* реагировать, отвечать
response [rɪsˈpɔns] *n* ответ, отклик
responsive [rɪsˈpɔnsɪv] *a* ответный
stimulus [ˈstɪmjuləs] (*pl.* **stimuli** [ˈstɪmjulaɪ]) *n* стимул
force [fɔ:s] *v* заставлять, принуждать
maintain [meɪnˈteɪn] *v* поддерживать, сохранять
although [ɔ:lˈðou] *conj* хотя, несмотря
volume [ˈvɔljum] *n* объем
add [æd] *v* добавлять
addition [əˈdɪʃn] *n* добавление
additional [əˈdɪʃnl] *a* добавочный, дополнительный
amount [əˈmaunt] *n* количество, сумма
output [ˈautput] *n* выброс
reason [ˈri:zn] *n* причина, основание
consider [kənˈsɪdə] *v* считать, полагать
consideration [kənˌsɪdəˈreɪʃn] *n* соображение, рассмотрение
considerable [kənˈsɪdərəbl] *a* значительный
entire [ɪnˈtaɪə] *a* целый, весь, полный
stroke [strouk] *n* удар

Упражнения

Упражнение 1. Подберите пары синонимов.

soon, which, readily, heart, quickly, that, easily, cardiac **Упражнение 2.** Расшифруйте следующие сокращения.

e.g., i.e., etc., mm, cm

Упражнение 3. Переведите следующие пары слов.

till - until, some - same, to effect - to affect, because - because of, few - a few, to expand - to expend

Упражнение 4. Просмотрите текст B (10 мин). 1) Найдите в нем информацию: а) о природе сердечного удара; б) об особенностях мышечной ткани сердца; в) работе желудочков сердца; г) факторах, которые характеризуют работу левого желудочка. 2) Найдите и переведите предложения: а) с причастиями I и II в функции определения; б) со словами **after, before.**

Упражнение 5. Прочтите данные суждения. Найдите в тексте B предло- жения, более полно выражающие мысль данного суждения, и прочтите их.

1. The heart beat is automatic and perfectly rhythmic. 2. Cardiac muscle tissue has a special property. 3. Both ventricles expel the same volume of blood. 4. The pressure in the aorta is about six times as great as in the pulmonary artery. 5. The inhibition of the vagus and sympathetic

centres influences the work of the heart. 6. The stroke volume depends upon the «venous return». 7. The chambers of the heart are able to supply additional blood.

Text B Nature of the Heart Beat

The fact that the heart, completely removed from the body, will go on to beat for a time shows that its beat is «automatic», i.e. does not require nerve impulses.

The beat is rhythmic: it is not jerky; the ventricles relax fully before the next contraction. This is explained by a special property of cardiac muscle tissue. The period of time during which the muscle is not responsive to a stimulus is called the refractory period. It is characteristic of the heart muscle to have a long refractory period. When the heart muscle is stimulated, it will contract but will not respond again to that stimulus (though it may respond to a stronger one) until it has relaxed. This rest period is occupied by the heart filling with blood, in preparation for the next beat. Even the heart forced to beat rapidly maintains a perfectly rhythmic beat; although the beats come closer together, there is always that little rest period in between.

The heart is a pump, but a double pump; the volume expelled by the right ventricle is the same as that expelled by the left. When exercise is suddenly undertaken, the «venous return», i.e. the blood returned to the heart through the veins, is suddenly increased. For a few beats the right ventricle does put out more blood than the left, but soon the additional blood has passed through the lungs and is entering the left ventricle. From then on, both put out the same amount.

The Cardiac Output

Cardiac output refers to the volume of blood which the left ventricle forces into the aorta per minute of time. It must be noted that *this* term refers to the output of the left ventricle only, and that the total output is twice as much. The reason that the output of the left ventricle is given this special name is that it supplies the entire body (except the lungs) with the blood. Another reason is that it does a much greater amount of work than does the right, and consequently is more likely to fail.

Cardiac output is the product of two factors: heart rate (the number of beats per minute) and stroke volume (the volume expelled per beat).

1. The heart rate is normally controlled by a balance between impulses reaching it over the vagus and over the sympathetics. Thus, inhibition of the vagus centre speeds up the heart. And

inhibition of the sympathetic centre slows down the heart. It seems that in the human most of the effect is achieved by inhibition of the vagal centre of the sympathetic region.

2. The second factor affecting cardiac output is the stroke volume, that is, the amount of blood which the left ventricle ejects per beat. The stroke volume depends upon the «venous return». The normal heart is capable of a considerable degree of enlargement; after the venous return is increased - as it is in exercise - the chambers of the heart are able to supply the additional blood. The walls of right atrium and the great veins are thin and stretch readily; therefore the heart rate is increased.

The increased venous return in exercise is brought about in the following manner: 1) after muscles contract, they exert a «milking» effect on the blood vessels which they contain. With each contraction, blood is squeezed out[1] into the veins; it cannot be squeezed back into the arteries because the arterial pressure is high - and with each relaxation the blood vessels of the muscle again fill up with blood; 2) in exercise, breathing becomes deeper. The heart lies within the thorax; when the thorax expands, blood is «sucked[2]into» the heart.

The two factors, working together, lead to the increase of the blood amount returned. First the right side of the heart, and within a few beats the left, are dilated and take bigger «bites» of blood. Thus the stroke volume is increased.

Notes

1. to squeeze out просачиваться
2. to be sucked всасываться

Часть III

Контрольно-обобщающие упражнения к уроку 7

Упражнение 1. Укажите и переведите придаточные предложения, где сказуемые переводятся настоящим временем.

1. Early Greeks considered that it was possible to transfuse animal blood to people. 2. The doctor was sure that the patient's blood belonged to the first group. 3. It is written that the blood was taken yesterday. 4. Landsteiner showed that people possessed different kinds of blood. 5. They are informed that conserved blood was brought two days ago.

(Ответ: 1, 2, 4. Если вы ошиблись, повторите ? 18 Грамматического справочника.)

Упражнение 2. Укажите и переведите предложения, где **after** и **before** являются союзами.

1. After the blood was exposed to the air, the process of clotting began. 2. Before blood transfusion, it is ideal to have donor and recipient of the same blood group. 3. The clot shrinks after its formation. 4. Lavoisier found that consumption of oxygen was greater after the ingestion of food than before. 5. After haemoglobin combines with oxygen, oxyhemoglobin is formed. 6. Human serum must be diluted about one-third with water before the cup-shaped corpuscles will predominate. **(Ответ:** 1, 5, 6. Если вы ошиблись, повторите ? 37 Грамматического справочника.)

Упражнение 3. Укажите и переведите предложения, где причастия I и II являются определением.

1. The clotting mechanism is extremely complex. 2. Fibrin is formed in long, interlacing threads. 3. Fibrin is derived from fibrinogen, which is ordinarily quite stable. 4. Blood platelets rupture readily when they are exposed to any other environment. 5. There is a substance in the blood called prothrombin. 6. The heart rate is controlled by a balance between impulses reaching it over the vagus and the sympathetics.

- **Conclusion**

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to do exercise 1,2.3 at the page 109 and learn the new words at the page 101,106. The lesson is over good bye!
-

Lesson 16

- **Topic of the lesson**: Respiration
- **Objectives:**

1. to introduce students to new material
2. to do exercises using both..and
3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Mrs. Hunt had a country cut front
In the front of her country cut petticoat.

- **Teaching / learning activities**

Instructions

RESPIRATION

1. Причастия I-II в функции обстоятельства (?? 20, 21)
2. Независимый причастный оборот (? 22)
3. Функции и перевод слов both, both ... and (? 40)

Часть I Слова к части I

Упражнения

Упражнение 1. Переведите следующие предложения с причастиями I-II. Определите функции причастий.

1. Examining coagulating blood upon a slide by means of the ultramicroscope, it is possible to see small masses of coagulum. 2. Lymphocytes fight disease producing antibodies and thus destroying foreign material. 3. Methoxamine and phenylephrine are vasopressors that, when given intravenously, elevate systemic vascular resistance. 4. The contraction and relaxation processes in vascular smooth muscle display more differences than similarities when compared with those in skeletal and cardiac muscle. 5. The patient examined complained of severe headache.

Упражнение 2. Замените следующие придаточные предложения причаст- ными оборотами, оставив союзные слова when, while, if. Переведите эти предложения.

Образец 1: When the ward doctor examines his patients, he usually checks up their blood pressure.

When examining his patients the ward doctor usually checks up their blood pressure.

1. When leucocytes arrive at the wound, they leave the blood stream. 2. While leucocytes engulf the bacteria within their own protoplasm, they wage war on the invaders. 3. When muscles contract, they exert a milking effect on the blood vessels which they contain.

Образец 2: When people are hospitalized, they undergo a thorough medical examination.
When hospitalized, people undergo a thorough medical examination.
1. When the heart muscle is stimulated, it contracts. 2. Medical treatment must be more useful if it is applied immediately. 3. Certain drugs may cause serious harm if they are used without doctor's permission.

Упражнение 3. Определите независимый причастный оборот в следующих предложениях. Переведите предложения.
1. There is a great deal of difference in the phagocyte activity of corpuscles concerning such substances as carbon and quartz particles, the former being ingested much more rapidly than the latter.
2. During the experiment the node and all efferent vessels were cleaned, care being taken to avoid trauma to the structures.
3. The heart is a double pump, the volumes expelled by the right and left ventricles being the same.
4. The experiment having been finished, we were ready to discuss it.
5. Diastole is the relaxation phase of the heartbeat, the atria and ventricles filling with blood.

Упражнение 4. Переведите следующие предложения. Определите, какую функцию выполняют слова both, both ... and.
1. When performing a transfusion, it is ideal to have both donor and recipient of the same blood group. 2. The teacher showed us the picture of the heart in both systolic and diastolic phases. 3. The pleural surface normally has the tissue on both sides. 4. Heart rate, arterial pressure and cardiac output were examined in both groups of patients. 5. Both blood and lymph protect the body carrying disease-fighting cells (phagocytes) and protein substances called antibodies which combat infection.

6. Both the diaphragm and the ribs move rhythmically and regularly during respiration.
Упражнение 5. Напишите глаголы, от которых образованы следующие существительные. Переведите их.
inhalation, exhalation, respiration, expansion, exertion, contraction, construction, action, acceleration

Упражнение 6. Прочтите и переведите следующие гнезда слов.

1. to decrease, to increase, decreased, increasing; 2. to participate, participation, participant, participating; 3. to accelerate, acceleration, accelerated, accelerating; 4. to assist, assistance, assistant, assisting; 5. to contract, contraction, contractility, contractile, contracted

Упражнение 7. Прочтите и переведите следующие сочетания слов.
increasing the size of smth, the increased capacity, the contraction of certain muscles, an expansion of the lung, accelerated respiration, to assist in producing inspirations

Упражнение 8. Просмотрите текст А и скажите, что в нем сказано о движении мышц при дыхании.
Text A
Movements of Breathing Mechanism of Inhalation and Exhalation
1. Respiration consists of rhythmically repeated inhalations and exhalations. Inhalation takes place as follows: the muscles participating in inhalation contract under the influence of nerve impulses. While contracting the diaphragm descends (flattens) increasing the vertical size of thoracic cavity. Contraction of the external intercostal and certain other muscles elevates the ribs increasing both the anteroposterior and transverse size of the thoracic cavity.

Thus muscular contraction increases the capacity of the thorax. Since the pleural cavity contains no air and the pressure in it is negative both lungs expand Fig. 8. Diagram of lungs simultaneously with the increase in capacity of the thorax.

The lungs expanding, the air pressure in them drops and atmospheric air rushes into the lungs through the air passages. Hence an inhalation involves a contraction of muscles, an increase in the capacity of the thorax, an expansion of the lungs, and entrance of atmospheric air into the lungs through the air passages.

2. Inhalation is followed by exhalation. The muscles participating in inhalation relax, the diaphragm rising. The ribs drop as a result of contraction of the internal intercostal and other muscles and because of their own weight. The capacity of the thorax decreasing, the lungs become compressed, the pressure in them rises and the air rushes out through the air passages.

3. The respiratory movements are rhythmic. An adult at rest makes 16-20 respiratory movements per minute, children make more movements (a newborn child makes up to 60 movements a minute). Physical exertion, particularly in untrained people, is usually accompanied by faster respiration. Accelerated respiration is also observed in many diseases. Sleep is accompanied by a slowing of respiration.

4. Movements of breathing. Changes in the volume of air in the lungs are brought about by movements both of the diaphragm and ribs. Contraction of the diaphragm increases the length of the capacity of the chest, while the upward movement of the ribs increases the cross section of the chest. Inspiration is due to contraction of the diaphragm and of the muscles attached to the ribs. These contractions are induced by nervous impulses. Expiration is a less active process than inspiration, for when the muscles relax the elasticity of the lungs themselves tends to drive out the air previously inhaled. Any impediment to breathing due to pressure or constriction in the respiratory passages is especially noticeable during expiration, because it is usually of a passive character. When the volume of breathing is increased by physical exercise many assessory muscles are involved while producing deeper inspirations. Expiration also involves a vigorous action of the abdominal muscles.

Упражнение 9. 1) Прочтите и переведите текст А. Первый абзац переве- дите письменно. 2) Найдите в тексте А ответы на следующие вопросы и зачитайте их.
1. How is contraction of the muscles participating in inhalation regulated? 2. Why does the size of the thoracic cavity increase? 3. When is impediment to breathing especially noticeable? 4. What processes does
the inhalation (exhalation) involve? 5. What do the movements of the diaphragm and ribs bring about?
3) Составьте письменно план текста А.

Упражнение 10. Подберите пары синонимов.
inspiration, to take place, to induce, per minute, respiration, breathing, to cause, to produce, inhalation, to occur, a minute

Упражнение 11. Подберите пары антонимов.
to compress, inhalation, to contract, to increase, to drop, upward, to decrease, to rise, downward, exhalation, to expand, to relax

Упражнение 12. Переведите следующие предложения, определите функции причастий.
1. For mechanical analysis the respiratory system may be divided into three parts: the gas (in the airways and air spaces), the lung structure, containing the gas, and the thorax containing the lungs. 2. Dynamic increases in airway resistance during expiration set the limit on the ventilatory capacity of the respiratory system in normal and diseased lungs. 3. While flowing through the

capillaries the blood accepts the oxygen from the alveolus and deposits carbon dioxide into the alveolus. 4. Airway pressures are not everywhere equal, being most negative in the alveoli. 5. During inspiration pleural pressures become more negative, the widening tendency increasing.

Упражнение 13. Опишите анатомическое строение легких, используя текст и рис. 8.

Часть II Слова к части II

Упражнения

Упражнение 1. Используя суффиксы -tion, -ate, -ly, -al, -ing, образуйте производные от следующих слов. Переведите их.

to inhibit, stimulus, automatic, reflex, spine, to relax, to excite, to cough, to sneeze, to alter

Упражнение 2. Просмотрите текст B (10 мин). 1) Выделите 4 основные фактора в процессе дыхания, описанные в тексте. 2) Найдите и переведите: а) предложения, где причастия выполняют функцию обстоятельства; б) предложения с независимым причастным оборотом; в) предложения со словами both, both...and.

Text B

Regulation of Respiration. Nervous Control of Breathing

The mechanism of regulation of respiration is very complex. Schematically it is as follows. In the medulla oblongata there is the respiratory centre. In the respiratory centre both excitation and inhibition continuously alternate. When excited it transmits impulses to the spinal cord and hence along nerves to the respiratory muscles; the latter contract and an inhalation takes place. When the respiratory centre is in a state of inhibition the transmission of impulses to the respiratory muscles ceases, the muscles relax and an exhalation re- sults.

The specific stimulus of the respiratory centre is carbon dioxide. As soon as the blood accumulates a certain amount of carbon dioxide, the respiratory centre becomes excited and an inhalation takes place. During inhalation the lungs expand, which stimulates the endings of the vagus nerve embedded in the tissue of the lungs. While arising in the receptors the excitation is transmitted along the vagus nerve to the respiratory centre and inhibits it, and an exhalation results. Thus respiration is automatically regulated; an inhalation stimulates an exhalation, and the exhalation brings about an accumulation of carbon dioxide which stimulates an inhalation.

Respiration is subjected to the control of the cerebral cortex; this being demonstrated by the fact that a person can voluntarily hold his breath for a very short time or change both the rate and depth of respiration. Cortical regulation of respiration is also evident in the acceleration of respiration during emotional states. Protective acts, such as coughing and sneezing, are associated with respiration. Both of them are performed reflexly; the centres of the reflexes are situated in the medulla oblongata.

Nervous control of breathing. The muscles of breathing have no independent or automatic rhythm, they contract only responding to impulses from the brain down the spinal cord. These impulses arise and are coordinated in a specialised area in the brain, the respiratory centre, which is in the medulla. The medulla is at the base of the brain and is a bulbous continuation of the spinal cord within the skull. The respiratory centre has to adjust the volume of air breathed and to maintain a uniform alkalinity of the blood; the centre effects the reciprocal alteration both of inspiration and expiration.

Упражнение 4. Прочтите данные суждения. Найдите в тексте В предложе- ния, более полно выражающие мысль суждений, и прочтите их.

1. In the respiratory centre excitation and inhibition alternate. 2. During inhalation the lungs expand. 3. Respiration is automatically regulated. 4. The cortical regulation of respiration is evident. 5. Protective acts are performed reflexly. 6. The muscles of breathing contract responding to impulses from the brain.

Часть III

Контрольно-обобщающие упражнения к уроку 8

Упражнение 1. Найдите и переведите предложения, где причастие I выполняет функцию обстоятельства.

1. We were talking about coming exams. 2. When the ribs are elevated by the inspiratory muscles they are drawn toward a horizontal plane thus increasing the anteroposterior diameter of the thorax. 3. Having obtained the nesessary results the scientists used them in their future works. 4. When considering neurogenic factors that regulate local blood flow one thinks of sympathetic non-adrenergic nerves.

(Ответ: 2, 3, 4. Если вы ошиблись, повторите ? 20 Грамматического справочника.)

Упражнение 2. Найдите и переведите предложения, где причастие II выполняет функцию обстоятельства.

1. When excised the lungs were not allowed to collapse completely.
2. Any pressure applied to a body is opposed by an equal pressure developed by the body.
3. The stability of the lung tissues is indicated by their behaviour when freed by surface influences.
4. As mentioned at the previous lecture next theme will be devoted to nervous control of breathing.
5. Inspiration enlargement of the anteroposterior and lateral diameters of the chest is accomplished through the contraction of muscles.
(Ответ: 1, 3, 4. Если вы ошиблись, повторите ? 21 Грамматического справочника.)

Упражнение 3. Найдите и переведите предложения с независимым причастным оборотом.
1. Respiration is usually either an automatic or a reflex act, each expiration sending up afferent, sensory impulses to the central nervous system.
2. It is impossible to cause death voluntarily holding the breath.
3. The air passes rhythmically into and out of the air passages, and mixes with the air already in the lungs, these two movements being known as inspiration and expiration.
4. The increase of the chest in size is due to the diaphragm, whose muscular fibres by their contraction are pushing down the abdominal organs.
(Ответ: 1, 3. Если вы ошиблись, повторите ? 22 Грамматического справочника.)

Упражнение 4. Укажите и переведите предложения, где слово both является а) частью составного союза; б) местоимением.
1. Modern scientists have been successful in the use of fibrinolytic therapy in both ball and disc mitral prosthesis. 2. When the diaphragm is released both lungs collapse by their own elasticity and expel the air. 3. The decrease in thoracic size during expiration is accomplished both by release of physical stresses and by active participation of contracting muscles. 4. Both these methods of examining the lungs are frequently used. 5. During forced expiration the contraction of the abdominal muscles allows both external and internal intercostals to act as expiratory muscles.
(Ответ: а) 1, 3, 5; б) 2, 4. Если вы ошиблись, повторите ? 40 Грамматического справочника.)

Упражнение 5. Выберите правильное значение выделенных слов.
1. A change in conditions [а) состояние, б) условие] affects the activities [а) активность, б) деятельность] of all organs. 2. Work causes [а) вызывать, б) заставлять] an increase in the metabolism. 3. A disturbance in the respiratory rhythm results from [а) являться резуль- татом,

б) приводить к] decreased excitability of the respiratory centre. 4. This is accompanied [a) сопровождаться, б) вызываться] by various disturbances in the activities of the organism. 5. Under some conditions the gaseous interchange in the lungs decreases [a) увеличиваться, б) умень- шаться].

(Ответ: la, б; 2a; 3a; 4a; 5б.)

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.

- You home task is to learn the exercise 5 at the page 118 and retell the text, learn by heart the new words

The lesson is over good bye!

Lesson 17

- Topic of the lesson: Digestion
- Objectives:

1. to introduce students to new material
2. to do exercises using the speech patterns
3. to develop their outlook

- Materials needed: handouts, teaching techniques, markers, blackboard, chalk
- Introduction

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Can you imagine an imaginary menagerie manager imagining managing an imaginary menagerie?

- Teaching / learning activities
  - Instructions

DIGESTION

1. Инфинитив в функции подлежащего и обстоятельства (? 25)
2. Сравнительная конструкция the ... the ... (? 4)
3. Функции и перевод слов due, due to (? 39)

Часть I

Слова к части I

Упражнения

Упражнение 1. Найдите формы инфинитива в следующих предложениях. Переведите предложения.

1. Spontaneous respiration was chosen to permit the development of pulmonary edema and alveolar collapse. 2. To determine progressive lung damage in this case was rather difficult. 3. To give first aid one must learn the basic first aids rules. 4. It is useful to summarize very briefly what is known about the elastic properties of elastin and collagen. 5. Experiments were done to observe the effects of temperature upon the respiratory process.

Упражнение 2. Заполните пропуски подходящими по смыслу прилага- тельными sooner, less, more. Переведите данные предложения.

1. The ... people are physically trained, the ... oxygen they have in their blood. 2. The ... appetizing the food is, the ... amount of secretion it causes. 3. The ... time you spend in the sanatorium, the ... you will recover after the illness. 4. The ... capacity of the thorax decreases, the ... the lungs become compressed.

Упражнение 3. Переведите следующие предложения со словами due, due to.

1. A diffusion block due to pulmonary edema or the opening up of arteriovenous anastomoses in the lungs is the usual event. 2. In one of these animals death was due to sudden asystole. 3. The apnea in these animals was due to inadequate blood flow and oxygen availability to vital centres in the central nervous system. 4. The lecture on physiology of respiration was delivered in due time. 5. Traumatic diseases are due to direct physical injury.

Упражнение 4. Отработайте чтение следующих слов, переведите их.

Упражнение 5. Запомните значение следующих суффиксов. Образуйте слова согласно данным моделям. Переведите эти слова.

1. Прилагательное (существительное) + -ify = глагол, имеющий значение «производить действие»: class класс - to classify классифицироват ь.

pure, intensive, solid, note, sign

2. Прилагательное + -ty (-ity, -ety) = существительное, обозначающее состояние, положение: extreme крайний - extremity конечность.
equal, proper, human, dense, immune, certain

Упражнение 6. Прочтите и переведите данные гнезда слов.
1. nutrient (n, a), nutritive, nutrition, nutritional; 2. to dissolve, solution, soluble, insoluble, solvent; 3. to vary, variant, various, variable, variability; 4. bacterium, bacterial, bacteriology, bacteriologist; 5. (to) vomit, vomiting, vomitive; 6. to digest, to ingest, digestive, digestion

Упражнение 7. Просмотрите текст А. Разделите текст на 3 части и озаглавьте их.
Text A
The Digestive System and the Process of Digestion and Absorption
1. The present text is given to explain the processes of digestion and absorption. The more we know about them, the better we shall understand how important these processes are.

2. Every cell of the human body requires certain chemical nutrients in the fluids that surround it. In order to supply these nutrients, the body must break down complex foods into molecules small enough to pass through tissues, enter the blood stream or lymphatic systems, and be delivered in a soluble form to the various body cells. This break of insoluble forms is known as digestion; the passage of such substances into the blood stream or lymph is known as absorption.

3. The human digestive tract is a long, muscular tube (up to 25 feet in length) that begins at the mouth and ends at the anus. This tube consists of the oral cavity, pharynx, esophagus, small intestine, and large intestine.

4. Several glands, located outside the digestive tract, are also important in the digestive process. Our tast is to describe them in detail.
These glands, known as accessory glands, are connected by ducts to the digestive tube. These accesory glands include the salivary glands,
Feces leave the body
Fig. 9. Pathway of food through the digestive tract
liver, gall-bladder and the pancreas. Each gland produces secretions that function in the digestive process, and each is therefore part of the digestive system.

5. The process of digestion is due to the activity of many enzymes, chemicals, and physical processes within the digestive tract. According to the area in which digestion is carried on, these digestive processes may be classified as salivary digestion, when occurring in the mouth; gastric digestion in the stomach; and intestinal digestion in the small intestine. In the large intestine (the last section of the digestive tube) no digestion takes place. Here water is absorbed, bacteria grow, and the unabsorbed solid-residue wastes of digestion collect and are excreted as feces.

6. The absorption means the passage of digested foods through the lining of the intestines into the blood or lymph. Practically all absorption takes place in the small intestine. A few drugs and alcohol are absorbed through the walls of the stomach, but no foods. Glucose is an exception, but it must be present in such high concentrations as to cause vomiting. Furthermore, we eat very little glucose, which is formed mainly in the small intestine due to the action of the dissaccharide-
splitting enzymes. Therefore, absorption of food does not normally occur through the stomach walls.

7. Water is absorbed throughout the length of the small intestine and also, as has been noted, in the ascending limb of the colon. With normal digestion, between 95 and 100 per cent of all carbohydrates, fats, and animal proteins are absorbed. Plant proteins, such as beans or peas, are protected by the plant cell membrane, so that only 60 to 70 per cent are absorbed. The remaining 30 to 40 per cent undergo bacterial decomposition in the intestine, which results in the formation of large amounts of intestinal gas («flatus»).
To study the pathway of food through digestive tract is very important for explanation of the process of digestion.

Упражнение 8. 1) Прочтите и переведите текст А. Второй абзац переведите письменно. 2) Найдите в тексте ответы на следующие вопросы и про- чтите их.
1. How are nutrients supplied to the body? 2. What processes are known as digestion and absorption? 3. What do we call the parts of the digestive tube from the mouth up to the anus? 4. Is glucose absorbed from the stomach or the small intestine? 5. Water and drugs arc absorbed through the stomach walls, aren't they?
3) Найдите в каждом абзаце предложения, выражающие основную мысль первого абзаца.
4) Составьте письменно план текста А.

Упражнение 9. Найдите в каждом ряду слово, противоположное по значению первому слову ряда.

1. soluble - decomposed, dissoluble, diluted, insoluble; 2. to include - to conclude, to exclude, to leave out; 3. solid - hard, weak, soft, firm, soluble; 4. ascending - going up (down), descending, sitting down

Упражнение 10. Переведите следующие предложения, определите функции инфинитива.

1. The present investigation is carried out to determine the liver functions in experimental dogs. 2. An attempt was made to correlate metabolism with humidity, light, or average daily temperature. 3. One of the purposes of this work is to prevent the action of the dissaccharide-splitting enzymes. 4. In order to ensure more adequate oxygenation the fluids bathing the mucose were recirculated. 5. From the curves of the blood ammonia concentration it is possible to obtain necessary information.

Упражнение 11. Определите в следующих предложениях конструкцию сравнения the ... the. Переведите предложения.

1. The greater amount of the substance was added to the nutrient, the more significant change in three or four experiments was produced. 2. The more specialized the animal is, the more differentiated its enzymes become. 3. The more food with an appetizing smell you digest, the more digestive juices will be poured out. 4. The greater the difference in temperature is, the more rapidly will heat be lost from the body. 5. The younger the individual is, the higher the caloric requirement - i.e. the more nutrition is needed.

Упражнение 12. Переведите следующие предложения; определите функции слов due, due to.

1. Jaundice is the yellow colour of skin sclerae and mucous membranes due to an increase of bilirubin in the plasma. 2. Some patients' digestive systems react more intensely to emotional stress due to hypersensitive nerve endings in their intestinal tract. 3. The secondary rise in oxygen consumption in normal cats may be due to the reconversion of lactic acid to glicogen in the liver. 4. It has been shown that the decrease in resistance across the stomach wall of the experimental dog is due to a decrease in the resistance across the external muscle layers. 5. Physiologists have raised the question as to whether the rhythmic activity of the heart muscle is due to some rhythmic power located within the heart muscle fibre.

Упражнение 13. Опишите прохождение пищи по пищеварительному тракту, используя текст и рис. 9.

Часть II Слова к части II

Упражнения

Упражнение 1. Отработайте чтение следующих слов, переведите их.

baruim sulphate, substance, process, human, limited, especially, resistance, contract, peristalsis, series, mix, axial, origin

Упражнение 2. Напишите исходные слова к данным производным и переведите их.

movement, observation, constriction, shapeless, interference, tubular, muscular, insufficient, digestion

Упражнение 3. Прочтите текст В (10 мин). 1) Разделите текст на 4 части и назовите тему каждой из них. 2) Найдите в тексте предложения, где: а) инфинитив выполняет функцию подлежащего; б) обстоятельства; в) употребляются слова due, due to. 3) Переведите эти предложения.

Text B

The Movements of the Stomach

It is advisable to study the movements of the stomach by direct observation by means of the X-rays. In order to make the shape of the stomach visible the food - bread and milk - is mixed with a quantity of barium sulphate. The presence of this substance does not interfere with the processes of digestion, but renders the gastric contents to the Rontgen rays.

In the human stomach the term fundus is limited to that part of the stomach situated above the cardiac orifice (in the erect position). The body of the stomach is marked off from the pyloric part by the incisura angularis on the lesser curvature represented in many animals by a strong «transverse band».

The pyloric portion consists of the pyloric vestibule (or antrum) and the pyloric canal, the latter being a tubular portion with thick muscular walls about 3 cm in length, especially well marked in children. When food has been swallowed (in the erect position) its weight is sufficient to overcome the resistance of the contracted gastric wall and some of it rapidly passes to the pyloric part. The remainder stays in the body of the stomach. It is due to constant pressure on its contents, that is

forced them towards the pylorus. Peristalsis begins almost at once, each constriction starting near the middle of the stomach, and deepening as it slowly progresses towards the pylorus.

These waves succeed one another, so that the pyloric part may present a series of constrictions. Their effect is to force towards the pylorus the food which has been mixed with gastric juice. The longer the pylorus remains closed the longer the food cannot escape and therefore is squeezed back, forming an axial reflux stream towards the body. These contractions last throughout the whole period of gastric digestion, and become more marked as it proceeds. Due to their action a thorough mixture of food and gastric juice results.

Movements of the stomach may be observed even on a stomach which has been excised and placed in warm water-salt solution. They must therefore have their origin in the walls of the stomach itself.

Упражнение 5. Прочтите данные суждения. Найдите в тексте В предложе- ния, более полно выражающие мысль суждений, и прочтите их.

1. It is advisable to study the movements of the stomach by means of X-rays. 2. The pyloric portion consists of the pyloric vestibule. 3. When food has been swallowed some of it passes to the pyloric part of the stomach. 4. Peristalsis begins near the middle of the stomach. 5. The contractions last throughout the whole period of gastric digestion.

Часть III

Контрольно-обобщающие упражнения к уроку 9

Упражнение 1. Найдите и переведите предложения, в которых инфинитив выполняет функцию а) подлежащего; б) обстоятельства.

1. To render surgical assistance, a surgeon should have a lot of knowledge and skill. 2. It is difficult to analyse the natural movements of the stomach in the empty and full states. 3. Since all parts of the stomach are not in the same transverse position it is therefore almost impossible to speak of a normal position or shape of the stomach. 4. Enterokinase increases the activity of all ferments in the pancreatic juice but acts as a co-ferment to activate trypsin secreted in inactive form. 5. A calorie is the amount of heat required to raise a kilogram of water one degree Centigrade.

(Ответ: а) 2, 3; б) 1, 4, 5. Если вы ошиблись, повторите ? 25 Грамматического справочника.)

Упражнение 2. Найдите предложения с конструкцией сравнения the ... the. Переведите предложения.

1. When a small quantity of liquid is swallowed into the empty contracting stomach, the liquid passes at once into the antrum. 2. The sooner he finishes his experiment on mechanical action of smooth muscle contraction, the sooner we start a new one. 3. The emptying rate of the stomach increases progressively from the onset of the completion of digestion. 4. The more high vitamin diet you try, the sooner you will recover. 5. The more appetizing smell the food has the more digestive juices will be poured.

(Ответ: 2, 4, 5. Если вы ошиблись, повторите ? 4 Грамматического справочника.)

Упражнение 3. Найдите и переведите предложения с составным предлогом due to.

1. Pancreatic juice is a clear alkaline secretion due to the presence of sodium bicarbonate. 2. The gastric secretion begins with food in the stomach due partly to mechanical distension, partly to chemical stimulation. 3. Nervous mechanisms permit due communication between widely separated portions of the gastro-intestinal tract. 4. The effect of stimulation of the splanchnic nerves is explained by the complication of asphyxia due to simultaneous vasoconstriction. 5. Disturbances of digestion may be due either to absence of certain secretions or to their presence in insufficient amounts.

(Ответ: 1, 2, 4, 5. Если вы ошиблись, повторите ? 39 Грамматического справочника.)

Упражнение 4. 1) Подберите к англо-американским единицам измерений соответствия в метрической системе.

1) inch, 2) foot, 3) ounce, 4) pound

1) 28.35 г, 2) 453.59 г, 3) 2.54 см, 4) 30.48 см (Ответ: 1-3, 2-4, 3-1, 4-2.)

2) Переведите в метрическую систему. 5 inches, 4 pounds, 25 feet, 3 ounces

Упражнение 5. Опишите процесс пищеварения, используя рис. 9

- Conclusion

- What was your home task for today?

  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.
- You home task is to learn the new words and exercise 1,2,3at the page 126 and learn by heart the new words

The lesson is over good bye!

Lesson 18

- **Topic of the lesson**: Nutrition
- **Objectives:**

1. to introduce students to new material
2. to do exercises using the speech patterns
3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Blake's black bike's brake bracket block broke.

- **Teaching / learning activities**
  - **Instruction**

NUTRITION

1. Инфинитив в функции определения (? 25)

2. Бессоюзные придаточные предложения (? 32)

3. Функции и перевод слова **for** (? 37)

Часть I

Слова к части I

yield [jiːld] *v* давать (плоды, результаты)
oxidation [ˌɔksɪ'deɪʃn] *n* окисление
repair [rɪ'pɛə] *v* исправлять; восстанавливать
provide [prə'vaɪd] *v* снабжать, обеспечивать
the former ['fɔːmə] *a* первый (из двух названных)
distribute [dɪs'trɪbjut] *v* распределять
equal ['iːkwəl] *a* равный
equality [ɪk'wɔlɪtɪ] *n* равенство
abundant [ə'bʌndənt] *a* обильный
abundantly *adv* обильно
upset [ʌp'set] *v* нарушать; расстраивать; опрокидывать
determine [dɪ'tɜːmɪn] *v* определять; обусловливать; детерминировать
essential [ɪ'senʃl] *a* существенный, важный

Упражнения

Упражнение 1. Переведите на русский язык следующие словосочетания; скажите, чем выражено определение.

attempts to increase the endogenous iron; the observations to be described; capacity to clear blood ammonia; an analysis based on; blood vessels surrounding the wall of the small intestine; the proteins to be absorbed; protein diet; complex foods to be broken down; obesity to be prevented; food absorption

Упражнение 2. Переведите следующие предложения. Определите: а) вид бессоюзных придаточных предложений; б) какой союз пропущен.

1. Studies in vivo we discuss here indicate that intestinal absorption is an important pathway to regulate the quantity of iron in the body. 2. The methods we present here were modified and gave satisfactory reproducible results. 3. Mechnikov thought old age was brought on by the absorption of the products of the proteolytic group of organisms. 4. We know digestive enzyme of the stomach is pepsin. 5. I.P. Pavlov showed that the digestive juices flow at the sight and especially at the smell of food.

Упражнение 3. Переведите следующие предложения со словом **for.**

1. For the assay of enzyme activity the animals were killed, the liver quickly removed, washed thoroughly with cold distilled water and placed in a beaker with cracked ice. 2. Protein is essential for growth and repair. 3. Heart pain persisted for half an hour so we had to dial 03 for the doctor to come. 4. The patient is to keep the bed, for his disease may affect the heart.

Упражнение 4. Прочтите и переведите данные гнезда слов.

1. oxide, to oxidize, oxidation, oxygen, to oxygenate; 2. to distribute, distribution, distributing; 3. equal, equally, equality; 4. abundant, abundantly, abundance

Упражнение 5. Просмотрите текст А и определите тему каждого абзаца.

Text A Foods

Foods are substances which when taken into the body yield energy on oxidation, build new tissue, repair old tissue and play an essential role in growth and nutrition. We know the oxidation of foods produces heat thus maintaining the body temperature and providing kinetic energy for work. Supplying bodily heat and energy and leaving waste materials behind the food is «burned up» in combination with the oxygen to be furnished by the air we breathe.

Scientists have studied the problem of food classification for many years. Foods are to be divided into two general classes. These are inorganic and organic foods. The former class includes inorganic salts and water. The latter class includes carbohydrates, fats and proteins. There are accessory foodstuffs called vitamins which are essential to growth and freedom from deficiency diseases[1].

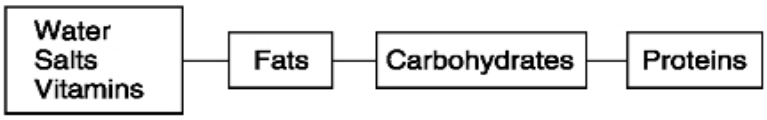

Fig. 10. Composition of food

The overall composition of the body is about 59 per cent water, 18 per cent protein, 18 per cent fat and 4.3 per cent minerals. At any time there is less than 1 per cent carbohydrate in the make-up of the body.

These substances which make up the body are not distributed equally in all organs. For example, the percentage of water varies from 90-92 per cent in blood plasma to 72-78 per cent in muscles, 45 per cent in bone, and only 5 per cent in tooth enamel. Proteins are found most abundantly in muscles. Fat is concentrated in the adipose (fat) cells under the skin and around the intestines.

Carbohydrates are found mainly in the liver, muscles and blood. Carbohydrates are known as the chief source of energy. The absence of carbohydrates upsets the fat and protein metabolism. As for the minerals, high levels of calcium and phosphorus form part of the bones and teeth, sodium and chloride are found mainly in the body fluids (blood plasma and lymph), potassium is the main mineral in mus- cles, iron is essential to red blood cells, and magnesium is found throughout the body.

These are the main minerals to be supplied to the body as food but many other minerals are essential to the human body in proportionally smaller amounts. They too must be ingested with our food. Other types of food (vitamins) needed in very small amounts for various functions of the body are essential.

You determine how you will feel throughout each day by the type of breakfast you eat. Your breakfast establishes how readily your body can produce energy that day or, more specifically, the amount of sugar in your blood. Your energy production, which corresponds to the quantity of sugar available, determines how you think, act and feel. Energy is produced in your body when sugar alone or sugar and fat together are burned (oxidized).

It should be noted, sixty more nutrients are needed to build health. For example, cheese is an excellent source of protein but is largely lacking in carbohydrate. Black currants provide a rich source of ascorbic acid though they make little contribution to the calorie intake of the body. Milk we usually use is regarded as the most excellent food, for it contains much protein but little sugar.

Therefore, it is neccessary to select a well balanced diet containing all the essential nutritional substances to maintain health and to prevent illness.

Notes

1. deficiency diseases авитаминоз

Упражнение 6. 1) Прочтите и переведите текст А. Абзац 3 переведите письменно. 2) Найдите в тексте А ответы на следующие вопросы и зачитайте их.

1. Does the oxidation of foods produce heat or energy? 2. How is the food burnt up? 3. What substance is the most abundant one in the body?

4. What substances are present in the body? 5. What is the percentage of different substances in different organs?

3) Найдите в каждом абзаце предложение, выражающее основную мысль абзаца.

Упражнение 7. Найдите в каждом ряду слово, синонимичное по значению первому слову ряда.

1. to supply - to give, to furnish, to support, to provide; 2. to upset - to set up, to disturb, to improve, to distress; 3. food - nourishment, foodstuff, provision; 4. deficiency - need, luck, shortage, imperfection;

5. to yield - to send, to give, to submit, to produce

Упражнение 8. Найдите в каждом ряду слово, противоположное по значению первому слову ряда.

1. the former - the last, the latest, the latter; 2. general - particular, local, definite, in detail; 3. deficiency - efficacy, efficiency, efficient, effectiveness; 4. essential - unimportant, unnecessary, vital, dispensable

Упражнение 9. Переведите на русский язык следующие предложения, определите функции инфинитива.

1. The most convenient approach to understand metabolism is to examine the properties of different sorts of foods. 2. It is interesting to see the apparatus used to determine the caloric value

of different foodstuffs. 3. From the intestines glucose is absorbed and carried to the liver to be converted into a form of carbohydrate, glycogen or animal starch. 4. To reduce weight in an obese patient is an important problem. 5. Fat yields 9 calories of heat per gram instead of the 4 calories to be yielded by sugar.6. Muscle fibres have the power to store glycogen.

Упражнение 10. Переведите предложения с бессоюзными придаточными.

1. Many substances the organism absorbs may be harmful, and many harmless substances may be difficult for the organism to handle. 2. We know proteins are absolutely essential to the proper nourishment of the human body. 3. There is some evidence vitamin A plays a part to protect the body against rickets. 4. It is known vitamin C occurs abundantly in the juices of the citrus fruits, tomatoes, germinated seeds, cabbages, carrots, beans, apples, turnips, rutabagas, raspberries, liver. 5. The carbohydrates animals most commonly ingest consist of a variety of sugars.

Упражнение 11. Переведите следующие предложения и определите функции слова **for.**

1. The young animals are practically porkilothermic at birth and continue to be so for some days. 2. They could not translate the article for it was written in French. 3. Each organism establishes for itself a level of nitrogen metabolism which is modified only with difficulty. 4. Carbohydrates and fats are food substances which do not contain nitrogen; they have high fuel value, and so are able to serve for the production of heat.

Упражнение 12. Заполните пропуски подходящими по смыслу словами **for, as, since, after, before.**

1. ... it is commonly stated one of the chief distinctions between animals and plants lies in the fact that the animals depend upon highly organized foodstuffs ... their source of supply. 2. The protozoa are considered ... very primitive organisms, rudimentary ancestors of higher animals, ... they are unicellular. 3. ... the discovery of streptomycin, a great deal of information has been accumulated concerning its use. 4. Rats deprived of vitamin D ... 35 to 40 days become unable to use their hind legs.

Упражнение 13. Переведите на английский язык.

1. Продукты питания, которые мы используем, можно разделить на два общих класса. Это органические и неорганические вещества. 2. Дополнительные вещества, которые должны присутствовать в нашей диете, - это витамины. 3. Отсутствие или недостаток углеводов в организме нарушает жировой и белковый обмен.

Часть II Слова к части II

cure [kjuə] *v* вылечивать, излечивать
reveal [rɪ′vi:l] *v* обнаруживать, открывать
conduct [kən′dʌkt] *v* вести, проводить (исследование и т.д.)
proper [′prɔpə] a правильный, надлежащий
improper *a* неподходящий, неправильный
improperly *adv* неправильно, неверно

Упражнения

Упражнение 1. Прочтите следующие слова и переведите их на русский язык.

actually, crystalline, substance, combination, essential, series, difference, isolation, synthesis, diet, to produce, product, spinach, cream, capsule, calcium, protein

Упражнение 2. Найдите в данном ряду слово, перевод которого дан в начале ряда. Переведите данные слова.

1. вылечивать - curare, curative, curable, cure; 2. источник - sour, south, resource, source; 3. проводить - conclude, conduct, convey, convoy; 4. означать - means, meaning, mean, main

Упражнение 3. Прочтите текст В (10 мин). 1) Выделите три основных момента, обсуждаемых в тексте по теме «Витамины». 2) Найдите предложения, где: а) инфинитив выполняет функцию определения; б) употребляется слово **for;** в) бессоюзные придаточные предложения. 3) Переведи- те предложения.

Text B

Vitamin means life. The story of vitamins actually begins in 1911, when a Polish chemist by the name of Kazimir Punk extracted from rice polishings[1] a crystalline substance. This substance was capable to cure beri-beri. Analyses of these crystals revealed the presence of nitrogen in basic combination, i.e. the «amino»-nitrogen; Punk therefore called this substance «vita-mine». The root «vita» indicates that the substance is essential to life and health. In this way, the word vitamin was born. For four years before Punk's discovery a series of studies had begun in the USA to determine the value of cereals such as wheat, corn and oats as a cattle diet. Eventually it was found necessary to resort to rats to solve the problem of cereal differences.

Today the successful isolation and synthesis of many of the substances has proved that vitamins are organic chemical compounds to be present in the diet for the maintenance of growth and health.

Vitamins are substances to be found in certain foods which are necessary for the growth, development and general health of the body. There are several different kinds of these protective substances to be provided in the diet. To make sure our bodies get all the vitamins they need, it is best to include several different vitamin-containing foods in the diet. Such foods include milk and many of the products made from it, all the green leafy vegetables like spinach, cabbage, lettuce, other fresh vegetables, fruit and fruit juices, whole-grained cereals, eggs and a number of others.

When we plan a nutrition program for any person, young and old, well and ill, we must know certain foods are the best sources each body requires.

1. Vitamin A: fruits and vegetables, cream, butter or margarine, eggs and liver.
2. The B vitamins: yeast, liver, whole-grained breads and cereals, milk, meat.
3. Vitamin C: orange or grapefruit juice, any fresh raw fruit or vegetable, ascorbic acid tablets if needed.
4. Vitamin D: fish-liver oil or vitamin-D capsule.
5. Vitamin E: soy-bean oil, vegetables oils.
6. Vitamin K: is produced by intestinal bacteria. The diet must be adequate in milk and unsaturated fatty acids and low in refined carbohydrates; intestinal bacteria are increased by eating yogurt.
7. Vitamin P (rutin): citrus fruits, especially lemons.
8. Calcium: milk, yogurt.
9. Phosphorus: milk, eggs, cheese, meat.
10. Iron: liver, yeast, meat, bread and cereals.
11. Proteins: yeast, milk, yogurt, cheese, meat, fish, eggs.
12. Liquids: milk, fruit, juices, soup, water.

Experts in the study of foods are constantly conducting experiments. They are making their discoveries public from time to time for such knowledge enables us to select the proper foods in order to protect us against the diseases.

Notes

1. rice polishings шелуха риса

Упражнение 4. 1) Найдите в тексте предложения, более полно выражающие мысль данных суждений, и прочтите их.

1. K. Punk has extracted a substance capable to cure beri-beri. 2. Vitamins are organic chemical compounds to be present in the diet. 3. Vitamins are found in certain foods. 4. Certain foods are the best sources each body requires. 5. Vitamin K is produced by intestinal bacteria.

2) Передайте основное содержание текста, используя предыдущее упражнение в качестве плана.

Часть III

Контрольно-обобщающие упражнения к уроку 10

Упражнение 1. Найдите и переведите предложения, в которых инфинитив выполняет роль определения.

1. The secret of a proper diet depends much on the ability of the cook or dietician to prepare and serve meals which are palatable and tasty to the individual. 2. Average intake of protein to maintain nitrogen equilibrium is 42 grams per day. 3. Practically all the chloride to be involved in metabolism enters and leaves the body in combination with sodium. 4. In order to use this drug you must consult your doctor. 5. In an experiment to measure the sensitivity of the reaction good results were achieved.

(Ответ: 1, 2, 3, 5. Если вы ошиблись, повторите ? 25 Грамматического справочника.)

Упражнение 2. Найдите и переведите бессоюзные придаточные предложения: а) определительные; б) дополнительные.

1. When the man smells something he likes to eat, the gastric juice is poured out in large quantities. 2. We know vitamin B_1 is widely distributed in nature occurring in most foods. 3. The cells select the amino acids they need and use them to construct new body tissue and such vital substances as antibodies, hormones, enzymes and blood cells. 4. The food we take and the air we breathe often contain poisonous substances and pathogenic microorganisms. 5. Chemical studies have shown vitamin D is exceedingly stable as regards oxidation and heating. 6. The four parts the pituitary consists of perform several functions and produce several secretions.

(Ответ: а) 1, 3, 4, 6; б) 2, 5. Если вы ошиблись, повторите ? 32 Грамматического справочника.)

Упражнение 3. Укажите, в каких предложениях **for:** а) союз; б) предлог.

Переведите эти предложения.

1. The ordinary intake of vitamin A by most adults is sufficient to maintain their health in good condition for administration of this vitamin decreases the susceptibility to the «common cold» (or lessens its severity). 2. Scientists have studied the deficiency diseases for many years. 3. The importance of vitamin D for growth and nutrition was established as a result of a series of discoveries. 4. The cell is not isolated

Vegetarians can get lots of calcium and iron in their food ... LOOK!

CALCIUM	IRON
Milk Cheese Yoghurt Leafy green vegetables Wholewheat bread Potatoes	Beans Wholewheat bread Dried fruit Cocoa Nuts Leafy green vegetables Yeast

And here are some of the foods where you can find the vitamins you need!

Vit. A	B_1	B_2	B_3	B_6	B_{12}	Folic acid	Vit. C	Vit. D	Vit. E	Vit. K
Carrots Spinach Parsley Butter Margarine Dried apricots Cheese	Yeast extract Peanuts Bran Oatmeal flour Wholewheat bread Peas	Almonds Cheese Wholewheat bread Dried peaches Mushrooms Beans Dates	Yeast extract Peanuts Wholewheat bread Mushrooms Beans Dates	Bran Whole-wheat bread Yeast extract Hazel-nuts Bananas Peanuts Currants	Eggs Cheese Yeast extract Milk Yoghurt Butter	Yeast extract Bran Spinach Peanuts Almonds Hazel-nuts	Oranges Grapefruit Spinach Cabbage Black currants Parsley Strawber-ries	Eggs Cheese Butter Margarine Sunlight enables the bo-dy to make Vft. D. in the skin.	Almost all foods	Green, Vege-tables

Fig. 11. Vitamins you need and the food where you can find them

from the outer world by its membrane, for it is entirely dependent on this outer world. 5. Cotton thread is used for ligatures.

(Ответ: а) 1, 4; б) 2, 3, 5. Если вы ошиблись, повторите ? 37 Грамматического справочника.)

Упражнение 4. Переведите производные от данных слов.

1. oxide - окислять, окисление, кислород, насыщать кислородом; 2. provide - обеспеченный, при условии, что..., временный; 3. distribute - распределение, распределительный

(Ответ: 1. oxidize, oxidation, oxygen, oxygenate; 2. provided, provided that, provisionary; 3. distribution, distributing.)

Упражнение 5. Дайте синонимы к следующим словам.

1. to supply; 2. to upset; 3. foods; 4. deficiency; 5. to yield **(Ответ:** 1. to furnish, to provide; 2. to disturb, to distress; 3. foodstuffs; 4. lack, shortage; 5. to produce.)

Упражнение 6. Дайте антонимы к следующим словам.

1. general; 2. deficiency; 3. around; 4. essential

(Ответ: 1. particular; 2. efficiency; 3. within; 4. unimportant, unnecessary.)

Упражнение 7.

1. Расскажите, какие вещества входят в состав пищи, используя рис. 10 на с. 128.

2. Расскажите, в каких продуктах содержатся те или иные витамины, используя рис. 11 на с. 135.

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to learn the new words and exercises 1-5 at the page 136 and translate the text

The lesson is over good bye!

Lesson 19

- **Topic of the lesson**: The excretory organs
- **Objectives:** 1. to introduce students to new material
- 2. to do exercises using the speech patterns
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.
I have a tongue twister for you. Read and repeat after me. You must learn it by heart.
Blake's black bike's brake bracket block broke

- **Teaching / learning activities**
  - **Instructions**

THE EXCRETORY ORGANS

1. Сложное подлежащее (? 27)

2. Функции и перевод слов **as well as, as well** (? 40)

Часть I

Слова к части I

empty [ˈemptɪ] *a* пустой; *v* опорожнять(ся), выливать

approximate [əˈprɔksɪmɪt] *a* приблизительный

approximately [əˈprɔksɪmɪtlɪ] *adv* приблизительно

average [ˈævərɪdʒ] *n* среднее (число); *v* составлять в среднем

evaporate [ɪˈvæpəreɪt] *v* испарять(ся); выпаривать

evaporation [ɪˌvæpəˈreɪʃn] *n* испарение; выпаривание

perspiration [ˌpɜːspəˈreɪʃn] *n* потение; пот; испарина

intake [ˈɪnteɪk] *n* поглощение, всасывание, прием внутрь

result [rɪˈzʌlt] **(in)** *v* приводить к чему-л.

frequency [ˈfriːkwənsɪ] *n* частота

urination [ˌjuərɪˈneɪʃn] *n* мочеиспускание

pure [pjuə] *a* чистый

overheating [ˈouvəˈhiːtɪŋ] *n* перегрев, перегревание

Упражнения

Упражнение 1. Переведите следующие предложения, определите сложное подлежащее.

1. The body is known to utilize six kinds of food-stuffs - carbohydrates, proteins, fats, water, mineral salts and vitamins. 2. When burned, the carbohydrates, proteins and fats are sure to yield a certain definite and measurable amount of heat energy. 3. Many substances which are readily absorbed by the organism prove to be harmful, and many harmless substances prove to be difficult for the organism to absorb. 4. Proteins are found to be absolutely essential to the proper nourishment of the human body. 5. Vitamin Cappears to be lacking in seeds, white bread, fats, yeast, purified proteins and carbohydrates. 6. Vitamin D is known to be the antirachitic substance.

Упражнение 2. Переведите следующие предложения, определите, какую функцию выполняют слова **as well** и **as well as.**

1. A calorie is a definite amount of heat as well as a centimetre is a definite amount of length. 2. The character of proper food substances for animals as well as for plants is different. 3. Every organism needs the organic materials to build new protoplasm and variety of purely inorganic substances as well. 4. Besides carbohydrates, proteins and fats, the food contains necessary mineral substances as well.

Упражнение 3. Дайте исходные слова к следующим производным. Переведите их.
various, harmful, excretory, namely, greater, evaporation, frequency

Упражнение 4. Познакомьтесь со значениями данных ниже приставки **over** и суффикса **ful.** Образуйте слова согласно модели. Прочтите и переведите их.
1. **over-** + различные части речи = соответствующая часть речи со значением избыточности. Соответствует русским приставкам *сверх-, над-, пере-:* heating *нагревание* - overheating *перегрев.*
to work, busy, to feed, to build, work, production, weight
2. Существительное (глагол) + **-ful** = прилагательное со значением «обладающий качеством, выраженным основой»: harm *вред* - harmful *вредный.*
success, care, beauty, joy, use, help

Упражнение 5. Прочтите и переведите данные гнезда слов.
1. empty, to empty, emptiness; 2. average, to average; 3. vapour, to evaporate, evaporation, evaporable; 4. frequent, frequency, frequently; 5. urea, urine, urination, urinary, ureter, urethra, urology, uremia

Упражнение 6. Просмотрите текст А, разделите его на 3 части и назовите тему каждой части.

Text A Excretory Organs

1. Various harmful and unnecessary substances are continually being formed in the human body. These substances entering the blood are eliminated from the body by the excretory organs, namely the kidneys, the skin and the lungs; the latter are passing out carbon dioxide and water vapour. The quantity of water lost through the lungs probably varies within small limits only. The quantity lost through the sweat varies, of course, with temperature as well as with exercise. It may be said that the amounts of water secreted through the kidneys and skin are of an inverse proportion to each other, that is, the greater the amount lost through the skin, the less will be secreted by the kidneys.

2. Through these three organs but mainly through the kidneys blood is being continuously depleted of water and the loss must be made up by the ingestion of new water.

3. Most of the body wastes are found to be eliminated in the urine by the urinary organs. The urinary system consists of the kidneys, ureters, urinary bladder and urethra. Urine is formed in the kidneys, which are the main organ of excretion. It then passes through the ureters into the urinary bladder which serves as a reservoir. The bladder is emptied through the urethra, which leads to the exterior of the body. The wastes are excreted as urine, which is normally composed of approximately 96 per cent water, plus urea and various salts. The density of urine appears to vary from 1.015 to 1.020; the pH averages about 6. The healthy adult seems to excrete an average of about 1.5 litres of urine from the body daily. From 40 to 65 per cent of all fluid taken into the body is eliminated as urine, the rest, by evaporation from the body surface, evaporation from the lungs, etc. When the loss of water through evaporation or perspiration is increased, as in summer months, the urine volume is reduced; if the water intake is increased, the volume of urine increases as well.

4. The combination of a warm, rainy day, increased liquid intake as well as moist air that prevents evaporation from the skin is likely to result in great frequency of urination.

5. The urine is being formed in the kidneys from many waste and harmful substances contained in the blood. Blood flows into the kidneys through the blood vessels. In the kidneys the blood is cleansed of these substances. Thus, the blood leaving the kidneys is pure while urine formed in the kidneys flows down special ducts - the ureters, passing into the bladder from which it is eliminated.

6. An excretory function is also performed by the skin. The skin being the cover of the body protects it from harmful external influence and serves at the same time as an excretory organ passing the sweat out.

7. Sweat is formed in tiny perspiration glands found in the skin. It consists of water in which substances similar to those in the urine are formed but in smaller quantities. The evaporation of perspiration is known to cool the body and protect it from overheat as well.

Упражнение 7. Прочтите и переведите текст А. Первый абзац переведите письменно. Найдите и запомните значение слов**the latter, through, only, that is, the greater ... the less.**

Упражнение 8. Найдите в тексте А ответы на следующие вопросы и прочтите их.

1. How are harmful substances eliminated from the body? 2. What organs pass out carbon dioxide and water vapor? 3. What are the organs of the urinary system? 4. How is water eliminated from the body? 5. When is the volume of urine increased or reduced? 6. What process takes place in the kidneys?

Упражнение 9. Найдите в каждом ряду слово, противоположное по значению первому слову ряда.

1. various - sum, some, same, seem; 2. the latter - former, the former, formal; 3. greater - lessen, lesson, lesser, less; 4. to increase -
to decrease, to decide, to decree, to demand; 5. to cool - to want, to water, to warm, to warn

Упражнение 10. Найдите в каждом ряду слово, перевод которого дан в начале ряда.

1. внешний, наружный - exterior, interior, exteriorly, exteriority; 2. в норме - normal, normality, normally; 3. посредством, путем - throughout, through, though, throw; 4. очищать, дезинфицировать - to clean, to claim, to cleanse, to clear

Упражнение 11. Прочтите следующие предложения. Определите, какой частью речи являются выделенные слова. Переведите предложения.

1. Most of the body *wastes* are eliminated in the urine by the urinary organs. 2. The bladder is *emptied* through the urethra which *leads* to the *exterior* of the body. 3. The wastes are excreted as urine which is *normally* composed of approximately 96 per cent of water plus urea and various salts. 4. In the kidneys the blood *is cleansed* of harmful substances. 5. Sweat is formed in tiny perspiration glands *found* in the skin.

Упражнение 12. Определите, чем выражено подлежащее в следующих предложениях. Переведите данные предложения.

1. The rate of urinary flow is known to be increased by various agents known in medicine as diuretics. 2. Three hours after injection 38-45% of the injected mercury was found in the kidneys. 3. Renal tubular excretory transport of selected sulfonamides is assumed to require a physicochemical interaction. 4. Under these conditions it was difficult to estimate the actual rate of tubular excretory transport. 5. The bladder is more likely to be affected with a direct pus-forming infection than by any other disease. 6. It is found that the process of urine secretion goes on constantly at the rate of about a drop every thirty seconds from each kidney.

Упражнение 13. Переведите следующие предложения со словами **as well as** и **as well.**

1. The most important function of the kidneys is to remove urea from the blood as well as to maintain the proper balance of water, salts and acids in the body fluids. 2. Urinalysis is an examination of urine to determine the presence of abnormal elements as well as the presence of

diabetes mellitus. 3. The purpose of this study is to determine the simultaneous rates of bronchial and renal urea excretion as well. 4. Any doc-

tor is responsible for the diagnosis, treatment and prevention of diseases as well.

Упражнение 14. Нарисуйте схему органов выделения. Опишите систему органов выделения, используя схему.

Часть II Слова к части II

choice [ʧɔɪs] *n* выбор
retain [rɪ'teɪn] *v* удерживать, сохранять
constituent [kən'stɪtjuənt] *n* составная часть
glomerulus [glə'merulәs] *(pl.* glomeruli [glə'merulaɪ]) *n* клубочек
glomerular [glə'merulə] *a* относящийся к почечному клубочку
excess [ɪk'ses] *n* избыток, излишек
precisely [prɪ'saɪslɪ] *adv* точно
distinguishable [dɪs'tɪŋgwɪʃabl] *a* различимый, отличимый
regard [rɪ'gɑ:d] *v* принимать во внимание; считать, рассматривать

Упражнения

Упражнение 1. Прочтите и запомните перевод следующих слов и словосо- четаний. Переведите предложения с этими словами и словосочетаниями.

1. except (that, for) за исключением (того, что); exception исключение; with few exceptions за редким исключением: The elements which compose the urine, with few exceptions, exist in the blood plasma.

2. regard *n* отношение; взгляд; in (with) regard to относительно, в отношении; regarding что касается, с точки зрения; regardless независимо от, несмотря на; *v* считать, рассматривать: Kidney must be regarded as the chief controller of chemical balance in the organism.

Упражнение 2. Напишите исходные слова к данным производным. Переведите все слова на русский язык.

constituent, precisely, glomeruli, distinguishable, regardless, excessive, composition, exception

Упражнение 3. Прочтите текст В (10 мин). 1) Разделите его на 2 части и назовите тему каждой части. 2) Найдите предложения: а) со сложным подлежащим; б) со словами **as well, as well as.** 3) Переведите эти предложения.

Text B

The Excretory Function of the Kidney

It has long been known that the kidney does not manufacture fully the elements which compose the urine. It is known only to extract them unchanged from the blood plasma where, with very few exceptions, they already exist. In other words, the urinary function is the excretion, but the kidney is found to exercise a choice among the numerous organic substances present in the circulating blood. Some substances, such as the proteins, are wholly retained in the organism, although the blood plasma contains a high concentration of them (70 to 80 grams per litre). Others are entirely taken away by the kidney as well as eliminated through the urine: this is the case with certain foreign bodies such as penicillin or streptomycin as well, which the organism eliminates by means of the kidney. Most of the constituents of the plasma are excreted in the urine in variable proportions; the quantities thus taken away by the kidney are not fixed and vary even from day to day for each substance eliminated. If the amount of salt absorbed is very great or very small, the concentration of salt in the blood and the total amount of salt in the individual as well will not vary at all; if practically no salt is absorbed, no salt will be eliminated; if much salt is absorbed its rate of elimination will rise, until after a few days it exactly counterbalances the excess taken in; the quantity of salt taken away by the kidney will be equal to the excess received.

Finally, we may ask ourselves what internal instrument may change at every moment the rate at which each constituent of the blood plasma is taken away by the kidney.

The basic instrument of this mechanism seems to be the nephron. Each kidney is formed of about a million nephrons, joined by an interstitial tissue through which the blood vessels as well as nerves pass. Thus the nephron is the morphological and functional unit of the system determining the composition of the urine. Its structure is not very simple. The glomerulus, a small bundle of arterial capillaries enclosed in a small round capsule, forms the head of the nephron. Although the glomeruli are small and hardly distinguishable by the naked eye[1], the total quantity of blood which passes through them every minute is very great: over a litre for the two kidneys of an adult, which is a quarter of the total blood distributed to all the rest of the organism in the same time.

This is the first stage in the production of urine, known as glomerular filtration.

Physiologically the kidney must not be regarded as just an organ for the formation of urine, wastes. The kidney appears to be the chief controller of the delicate chemical balance necessary to life.

Notes

1. by the naked eye невооруженным глазом

Упражнение 4. Найдите в тексте В предложения, более полно выражающие мысль данных суждений, и прочтите их.

1. The kidney doesn't manufacture the elements which compose urine. 2. The urinary function is that of excretion. 3. Some substances are retained in the organism. 4. Penicillin is eliminated through the urine. 5. The basic instrument of the kidney is the nephron.

Часть III

Контрольно-обобщающие упражнения к уроку 11

Упражнение 1. Найдите и переведите предложения со сложным подлежащим.

1. The chief function of the kidneys is to separate fluid and certain solids from the blood. 2. The excretion of urine is thought to be possible by the selective action of the cells of the kidney tubules. 3. When the kidneys fail to act solid waste substances accumulate in the blood. 4. The formation of urine is found to begin in the glomerulus as water salts, sugar, urea and other wastes. 5. Streptococci do not seem to cause glomerular inflammation by direct invasion. 6. After the first two weeks of acute nephritis patients usually appear to make a complete recovery.

(Ответ: 2, 4, 5, 6. Если вы ошиблись, повторите ? 27 Грамматического справочника.)

Упражнение 2. Укажите, в каких предложениях **as well as, as well:** а) составной союз; б) наречие. Переведитепредложения.

1. Acute glomerular nephritis may involve various systems of the body as well as the glomerular tufts. 2. Specific gravity is a measurement that reflects the amount of wastes as well as minerals in the urine. 3. Acids as

well as other substances which the body does not need are secreted into the distal renal tubules from the blood stream. 4. Drugs can be obtained from plants, animals and chemical substances as well. 5. While examining a patient the doctor was asking him about his previous and present condition as well.

(Ответ: a) 1, 2, 3; b) 4, 5. Если вы ошиблись, повторите ? 41 Грамматического справочника.)

Упражнение 3. Переведите на английский язык производные от данных слов.

1. excrete - выделение, выделительный, экскреция; 2. active - активность, активно, деятельность; 3. constitute - составная часть, телосложение; 4. urine - мочевой, мочеиспускание, урология; 5. sweat - потеть, потение, потный, потовые (железы)

(Ответ: 1. excretion, excretory, excretion; 2. activity, actively, activities; 3. constituent, constitution; 4. uric (urinary), urination, urology; 5. to sweat, sweating, sweaty, sweat (glands).)

Упражнение 4. Дайте синонимы к следующим словам.

1. to eliminate; 2. waste products; 3. manner; 4. to take place; 5. quantity **(Ответ:** 1. to excrete; 2. waste matter (wastes); 3. way; 4. to occur; 5. amount.)

Упражнение 5. Образуйте словосочетания, используя слова из пунктов а) и б). Переведите их.

а) 1. to eliminate; 2. to carry out; 3. to excrete; 4. to get rid of; 5. to throw out; 6. excretory; 7. activity (of);

б) 1. the excess of water (constituents); 2. organ(s); 3. action; 4. the kidneys and skin; 5. sweat glands; 6. muscular; 7. the function; 8. waste products **(Ответ:** 1-1, 8; 2-1, 7, 8; 3-1, 8; 4-1, 8; 5-1, 8; 6-2, 3; 7-4, 5, 6.)

- **Teaching / learning activities**
  - **Instructions**
- Conclusion

▪ What was you home task for today?

Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to learn the new words and retell the text at the page 138,142

The lesson is over good bye!

Lesson 20

- **Topic of the lesson**:
- **Objectives:** 1. The endocrine system
  2. to do exercises using articles
  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week. As you all no English is so important in our days. So you must do all your best to learn it. As English proverb says " Where is the will there is a way". You can write this proverb in your notebooks. Ok, lets begin our lesson than.

- **Teaching / learning activities**
- **Instructions**

THE ENDOCRINE SYSTEM

1. Сложное дополнение (? 26)

2. Составные союзы **either ... or; neither ... nor; so ... that; not only ... but** (? 40)

Часть I

Слова к части

activity [ak'tıvıtı] *n* (обыкн. *pl.*) *n* деятельность
arouse [ə'rauz] *v* возбуждать
voluntary ['vɔləntərı] *a* произвольный
involuntary [ın'vɔləntərı] *a* непроизвольный
thyroid ['θaırɔıd] *n* щитовидная железа
emergency [ı'mə:dʒənsı] *n* тяжелое состояние больного, требующее немедленной помощи; экстренная необходимость
removal [rı'mu:vl] *n* удаление, устранение
fail [feıl] *v* отказать в действии, провалиться, не удаться
failure ['feıljə] *n* недостаточность, остановка, разрыв, провал, неудача
duct [dʌkt] *n* проход; проток, канал
affect [ə'fekt] *v* влиять на, поражать (болезнью); воздействовать
measure ['meʒə] *n* мера; v измерять

Упражнения

Упражнение 1. Переведите следующие предложения с конструкцией «слож- ное дополнение» на русский язык.

1. We know nephron to be the histological kidney unit. 2. A great deal of experimental work showed a dilute urine to be filtered by the glomeruli and the tubules to have an absorption function. 3. The experimentalists found the decrease in body temperature to increase urinary secretion. 4. Bowman in 1842 found organic constituents to be secreted by the cells of the convoluted tubules. 5. Scientists found glomerular filtration to occur in all vertebrate kidneys.

Упражнение 2. Замените следующие придаточные предложения конст- рукцией «сложное дополнение».

1. We know that glomeruli are absent in certain fishes. 2. Most physiologists believe that the phenomenon of urinary secretion is due to filtration of the non-colloid constituents of the plasma through the glomerulus. 3. Some investigators thought that the rate of flow was a paramount factor governing renal secretion. 4. The doctor supposed that the rise of blood pressure caused increased urination. 5. Scientists consider that a balanced diet is necessary for everybody.

Упражнение 3. Прочтите и переведите следующие предложения с со- ставными союзами **either ... or, neither ... nor, not only ... but (also), so ... that.**

1. Experimental work has shown that removal of one-half, two-thirds and sometimes three-fourths of the kidney substances in the dog produces changes neither in urinary volume nor in urinary nitrogen. 2. The lecturer demonstrated that in the frog's kidney indigo carmine, neutral red and ferric ammonium citrate not only appear in the glomerular filtrate but also in proportion to their concentrations in the serum. 3. The decreased rate of glomerular secretion results in its slower passage through the tubules so that water absorption is more complete. 4. The percentile chloride may either increase or decrease, but the total excretion is always greater.

Упражнение 4. Заполните пропуски составными союзами **either ... or, neither ... nor, not only ... but, so ... that.**

1. The cations K and Ca induce diuresis when administered ... together ... in succession. 2. The kidney is an organ capable of altering the
quantity and quality of the urine secreted .....the water balance and
osmotic relations in the blood and tissues are kept within optimal ranges. 3. The functions of the kidney are ... numerous ... they require a high degree of correlation as well. 4. ... our group ... group 5 decided who will be the first to begin the experimental work on glomerular filtration.

Упражнение 5. Отработайте чтение следующих слов и словосочетаний.

endocrine [ˊendoukraın], similarly [ˊsımıləlı], medulla [meˊdʌlə], adrenal [ədˊriːnəl], failure [ˊfeıljə], insufficient [ınsəˊfıʃənt], hypophysis [haıˊpɔfısıs]

Упражнение 6. Образуйте слова согласно модели и переведите их. Запомнить значение суффикса **-ize** и приставки **inter-.**

1. Прилагательное, существительное + **-ize (-ise)** = глагол: oxide *окись* - to oxidize *окислять.*

active, material, popular, crystal, immune, special

2. **inter-** + существительное, прилагательное, глагол = производное слово, обозначающее взаимодействие, взаимовлияние, положение между...: to act *действовать* - to interact *взаимодействовать.*

change, to connect, coastal, national, action, auricular, cellular, clavical

Упражнение 7. Прочтите и переведите данные гнезда слов.

1. to act, action, activity, activities, to activize; 2. to emerge, emergence, emergency, emergent; 3. to fail, failure, failing; 4. to

disturb, disturbance, disturbed; 5. to suffice, sufficient, sufficiency, sufficiently

Упражнение 8. Прочтите и переведите следующие словосочетания.

to put into action, in case of emergency, emergency case, movable kidney, heart failure, failing sight, to measure out a spoonful of medicine

Упражнение 9. Просмотрите текст А. Разделите текст на смысловые части.

Text A

Endocrine Glands

1. There are two organ systems - the nervous system and the endocrines - which coordinate the activities of all others. Almost nothing can happen to the body anywhere without appropriate response either motor or perceptual, voluntary or involuntary. Similarly, various parts of the endocrine system act upon each other and other organs, stimulating them to do their special jobs. Thus, the thyroid gland stimulates the metabolism of all bodily parts. The adrenal medulla mobilizes the activities of many organ systems in case of the emergency. And the adrenal cortex exercises control over many body functions, so important that its removal results in

failure of the functions and

the death of the animal. 2. Endocrine glands or glands of internal secretion are ductless glands, that is, they empty their secretions - chemical substances called hormones (from the Greek word «hormao» - excite) - directly into the blood stream. The hormones are carried through out the organism with the blood and are delivered to various organs whose activity they either stimulate or depress. Neither single hormone nor endocrine gland acts wholly by itself at any time.

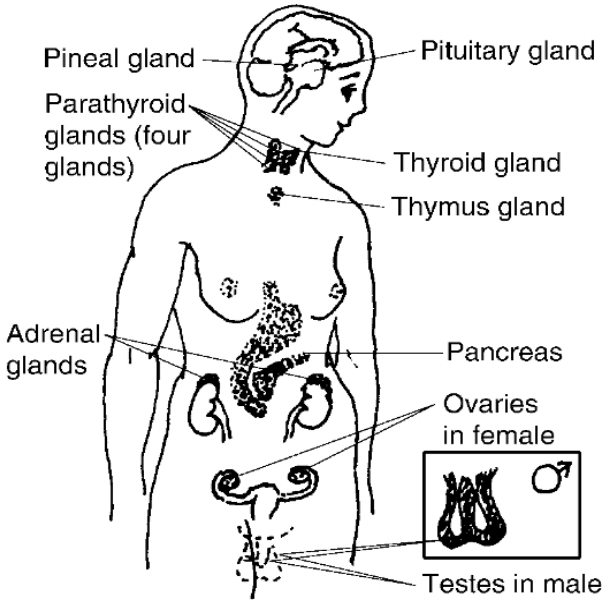

Fig. 12. The endocrine system

3. We know hormones to play a very important part in the organism. Many of them affect metabolism and the activity of the cardiovascular and other systems. A disturbance in the activity of the endocrine glands is accompanied by changes throughout the organism. These changes may be not only due to an increase in the function of a gland (hyperfunction) but to a decrease (hypofunction).

4. A hyperfunctioning gland secretes a superfluous amount of hormones and a hypofunctioning gland secretes an insufficient amount. The amount of hormones produced by the endocrine glands in 24 hours measures fractions of a milligram.

5. The functions of all the endocrine glands are interconnected so that the glands make up a single system. Physiologists consider the hypophysis to be the chief gland of this system; they consider it to produce special substances which stimulate the activities of other endocrine glands.

6. The activities of endocrine glands are regulated by the nervous system. It is known to exercise direct control over the endocrine glands through the nerves and neurohumoral control, particularly through the hypophysis. The hormones in their turn affect the functions of the different parts of the nervous system.

Упражнение 10. Прочтите и переведите текст А. Первый абзац переведите письменно.

Упражнение 11. Найдите в тексте ответы на следующие вопросы и зачи- тайте их.

1. The functions of various endocrine glands are different, aren't they? What are they? 2. Is the disturbance in the activity of the endocrine glands accompanied by any changes throughout the organism? 3. What is hyperor hypofunction? 4. Why is hypophysis considered the chief gland of the endocrine system? 5. How do the endocrine and nervous systems interact?

Упражнение 12. Найдите ключевые предложения в каждой смысловой части текста А и выпишите их.

Упражнение 13. Найдите в каждом ряду слово, перевод которого дан в начале ряда.

1. деятельность - activator, activities, activation, activity, activist;

2. подобным образом, также - similarity, similar, simple, similarly;

3. таким образом, так - so, then, thus, actually; 4. влиять на... - to effect, to defect, to affect

Упражнение 14. Прочтите и переведите данные предложения. Определите, какой частью речи являются выделенные слова.

1. *Thus* the thyroid gland stimulates metabolism. 2. Hormones *affect* metabolism and the function of the cardiovascular system. 3. The *functions* of endocrine glands are interconnected. 4. The nervous system *exercises* direct control over the endocrine glands *through* the nerves and neurohumoral control. 5. The hormones *either* stimulate or depress the *activity* of various organs. 6. The *activities* of endocrine glands are regulated by the nervous system.

Упражнение 15. Переведите следующие предложения. Определите функции инфинитива

1. The methods developed to establish special aspects of endocrinology have become diversified and complicated. 2. The existence of many hormones to be discussed must be regarded as probable rather than demonstrated with certainty. 3. The hypophysis is believed to be the chief endocrine gland. 4. The chief action of the thyroid hormone is to accelerate all oxidations, particularly those of fat and protein. 5. The discharge of thyroid hormone appears to be guided by a thyrotropic pituitary hormone. 6. The scientists believe insulin and anterior pituitary hormones to exert contrary actions on the blood sugar level.

Упражнение 16. Переведите следующие предложения. Запомните значение парных союзов **either ... or, neither ... nor, so ... that, not only ... but.**

1. The observations of surgeons on thyroid deficiency revealed that internal secretions are not only necessary for proper growth and nutrition but for normal mental development as well. 2. An excess of the somatotropic hormone, either due to hypersecretion or injection of extracts, causes gigantism and leads to acromegaly in adults. 3. The molecular weight of insulin is so great that

prospects of its synthesis seem very remote. 4. While asked the student could neither describe nor show the pineal gland in figure 12.

Упражнение 17. Переведите данные предложения на английский язык письменно.

1. Нервная и эндокринная системы координируют и стимулируют деятельность организма. 2. Эндокринные железы не имеют про- токов и выделяют свой секрет непосредственно в кровь, которая разносит его по организму. 3. Снижение функции или понижение активности эндокринных желез вызывает изменения в работе всего организма. 4. Деятельность всех эндокринных желез взаимосвязана и регулируется гипофизом. 5. Нервная система контролирует работу эндокринных желез.

Упражнение 18. Опишите органы эндокринной системы, используя текст и рис. 12.

Часть II Слова к части II

intermediate [ˌɪntəˈmiːdjət] *a* промежуточный, средний
border [ˈbɔːdə] *n* край; граница
set *n* ряд, серия; набор
dilute [daɪˈljuːt] *v* разбавлять, разводить
excessive [ɪkˈsesɪv] *a* избыточный, чрезмерный
intensify [ɪnˈtensɪfaɪ] *v* усиливать

Упражнения

Упражнение 1. Прочтите и переведите следующие слова.

hypothalamus, anterior, intermediate, posterior, microscope, fibre, secretion, circulation, neurons, neurohumoral, gigantism, acromegaly, oxitocin, to intensify

Упражнение 2. Найдите в данном ряду слово или словосочетание, значение которого дано в начале ряда.

1. поскольку - in so far as, so far as, as far as; 2. серия, ряд - row, line, series, set; 3. то есть - all that, so that, that is, that is why

Упражнение 3. Найдите в данном ряду слово или словосочетание, синонимичное данному в начале ряда.

1. fairly - rather, too, enough, actually, completely; 2. to break up - to believe in, to end, to divide into... ; 3. adults - teenagers, children, the old, grown-ups; 4. insufficient - enough, lacking, deficient, excessive

Упражнение 4. Запомните значение сочетаний со словом **that.**

that is the point в этом суть дела
that is to say то есть
that is why вот почему
now that теперь, когда

Упражнение 5. Прочтите текст В (10 мин). 1) Разделите его на три смысловые части. 2) Найдите предложения: а) с конструкцией «сложное

дополнение»; б) с парными союзами **either...or, neither...nor, so ... that, not only...but.** 3) Переведите эти предложения.

Text B

The Hypophysis (the Pituitary)

We know the hypophysis to be a small oval body weighing about 0.5 g; it is located in the cranial cavity and is connected with the hypothalamus. The gland consists of an anterior lobe, an intermediate part and a posterior lobe; the borders between them can be seen only under the microscope. Experimental and clinical observations strongly suggest anterior lobe to be necessary for proper growth to adult stature, for normal development and function of the reproductive system and for control the activities of other endocrine glands. The posterior lobe remains connected to the brain by means of the pituitary stalk, through which nerve impulses travel from the hypothalamus. The anterior lobe, so far as is known, receives no nerve fibres of any kind, and its control must then depend on the presence of substances in the blood. In spite of all this, there appears to be a way whereby the brain can exercise a fairly direct control over the anterior lobe. The blood vessels leading to the hypothalamus break up into capillaries; having passed through these capillaries, the blood is gath- ered into small veins; these veins pass downward so that they open into another set of capillaries in the anterior lobe. This is called the hypotha- lamic-hypophyseal portal system. Excision of the anterior hypophysis neither alters the lipid content of the liver nor inhibits the accumulation of large amounts of lipids in the liver.

The hypothalamus has been found to secrete special substances which regulate the secretion of the hypophysical hormones. The activities of the other endocrine glands are thus subject to neurohumoral regulation through the hypophysis.

Disfunction of the anterior lobe of the hypophysis is accompanied by changes throughout the organism. For example, excessive secretion of the growth hormone in childhood results in gigantism. Such people may grow to a height of 2.5-2.6 m. Excessive secretion of this hormone in adults results not only in excessive growth of the bones of the face, fingers and toes, but in enlarged nose, tongue and certain other organs. This disease is called acromegaly. Insufficient secretion of the growth hormone in childhood is accompanied by retarded growth (dwarfism). It is a relatively rare condition associated with either early atrophy or absence of the anterior lobe.

The posterior lobe of the hypophysis secretes oxytocin and vasopressin. Physiologists consider oxytocin to intensify the contractions of the uter-
ine muscles and it is therefore used to boost weak labour. We know vasopressin to cause constriction of the blood vessels, especially those of the uterus.

Упражнение 6. Прочтите следующие суждения. Найдите в тексте В пред- ложения, более полно выражающие мысль данных суждений, и прочтите их.

1. The hypophysis is connected with hypothalamus. 2. There are two lobes in the gland. 3. Hypothalamic-hypophyseal portal system of blood vessels supplies blood to the anterior lobe of the hypophysis. 4. Hypophysis regulates the activity of other endocrine glands. 5. Disfunction of the anterior lobe of the hypophysis is accompanied by changes of different kind throughout the organism.

Часть III

Контрольно-обобщающие упражнения к уроку 12

Упражнение 1. Найдите и переведите предложения со сложным дополне- нием.

1. Thyroxine is necessary in the body to maintain a normal level of metabolism in all body cells. 2. Parathyroid hormone causes calcium to leave bone tissue and enter the blood stream. 3. Removal of the thymus gland is found to be helpful in treatment of muscular-neurological disorders. 4. Cells need oxygen to carry on metabolic processes. 5. We know the pituitary gland to be also called the hypophysis. 6. Pituitary growth hormone acts on bone tissue to accelerate its growth in the body.

(Ответ: 2, 5. Если вы ошиблись, повторите ? 26 Грамматического справочника.)

Упражнение *2.* Укажите, в каких предложениях использованы составные союзы.

1. Insulin is necessary in the blood stream so that sugars can pass from the blood into the cells of the body. 2. In acute nephritis some glomeruli are more severely involved than others, but practically no glomerulus escapes some injury. 3. Treatment of thyrotoxicosis may include either thyroidectomy or management with antithyroid drugs. 4. The ovaries are held in place on either side of the uterus by the utero-ovarian ligaments. 5. In his last report the professor spoke neither of hyperfunction nor

hypofunction of endocrine glands. 6. Overproduction of glucocorticoids leads not only to obesity, moonlike fullness of the face but also to elevated blood sugar, high blood pressure and weakness (fatigue).

(Ответ: 1, 3, 5, 6. Если вы ошиблись, повторите ? 40 Грамматического справочника.)

Упражнение 3. Расшифруйте данные сокращения. i., f., oz(s), g., lb., 1., ml., cm.

(Ответ: inch, foot *(pl.* feet), ounce(s), gramme (gram), libra *(лат.* для pound), litre, millilitre, centimetre.)

Упражнение 4. Опишите функции эндокринных желез, используя рис. 12.

Lesson21

THE NERVOUS SYSTEM

1. Герундий (? 23)

2. **ing**-формы в различных функциях (? 24)

Часть I

Слова к части I

actually [ˈæktʃuəlɪ] *adv* действительно, фактически
touch [tʌtʃ] *v* трогать, касаться
bundle [ˈbʌndl] *n* пучок, узел
cerebrum [ˈserɪbrəm] *n* головной мозг
cerebellum [serɪˈbeləm] *n* мозжечок
feel [fi:l] *v* чувствовать, ощущать
feeling *n* чувство, ощущение
treat [tri:t] *v* лечить; обрабатывать; обращаться
treatment [ˈtri:tmənt] *n* лечение, терапия; обработка; обращение

Упражнения

Упражнение 1. Переведите следующие предложения с герундием.

1. Stimulating the somatotropic hormone upon growth can be partly correlated with its acceleration of metabolism. 2. Certain researchers believe that the hypophysectomized animal differs essentially from the normal in that it has lost the power of converting fats to carbohydrates. 3. In acromegaly and gigantism X-ray pictures reveal deepening the pituitary fossa of the sphenoid bone. 4. The thyroidectomy is removing the thyroid gland. 5. Thyroxine and the somatotropic pituitary hormone
are regarded as basic metabolic hormones necessary for maintaining general nutritive conditions.

Упражнение 2. Найдите ing-формы в следующих предложениях.
Переведите предложения.

1. Thyrotropic hormone is of considerable importance not only in regulating the thyroid secretion but in accounting for many metabolic effects. 2. Related injections of extracts containing ketogenic hormones cause fat infiltrations of liver, reduction in fat of other tissues and ketosis. 3. The stimulating action of the somatotropic hormone upon growth can be partly correlated with its acceleration of metabolism. 4. Injecting hormones into normal young animals results in animals of large size and precocious sexual development. 5. Acromegaly and gigantism produce overgrowing of bones and there may be an actual lengthening of the spinal column.

Упражнение 3. Отработайте чтение следующих слов.

nerve [nə:v], touch [tʌtʃ], actually [ˈæktʃuəlɪ], area [ˈɛərɪə], ether [ˈi:θə], anesthetics [ˌænɪsˈθetɪks], novocaine [ˈnouvəkeɪn], yawning [ˈjɔ:nɪŋ]

Упражнение 4. Прочтите и переведите следующие словосочетания.

1. to react upon each other, reaction power, the reaction of eye to the light, Wasserman reaction, reaction of sensibility; 2. to feel one's pulse, to feel like doing smth, to feel tired, to feel fine, a

feeling of danger; 3. to treat with penicillin, surgical treatment, treatment by exercises, to try many treatments for pneumonia, to be under treatment

Упражнение 5. Просмотрите текст А и сравните по содержанию обе части текста.

- **Conclusion**

- What was you home task for today?

Who is ready? Come to the blackboard.

- Have you any questions? What are the articles? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to …

- You home task is to learn new words translate the text

- The lesson is over. You may go. Have a nice weekend.

Lesson 2 1

- **Topic of the lesson** The nervous system
- **Objectives:** 1. to introduce students to new material
  2. to do exercises using -ing
  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? You haven't news? There is an English proverb: "No news is good news".

Ok, lets begin our lesson than.

I have a tongue twister for you. What are these letters s, sh?

Sela sells sea shells at the sea shore.

- **Teaching / learning activities**
  - **Instructions**

us System. The Brain and Nerves

1. Nerves lead from the spinal cord or from the brain to each part of the body. Then they lead from each part of the body back to the brain or spinal cord. The brain and spinal cord are the centres of this system of nerves.

2. All parts of your body are connected by nerves. The nerve cells with their fibres make up the nervous system. When we study one

Fig. 13. Diagram to illustrate some of the more important centres in cerebral hemispheres

nerve cell, we see that it has a long fibre at one end and short fibres at the other. The nerve cells send impulses to each other by means of the fibres at their ends. These fibres do not actually touch but are so close to each other

that an impulse can travel from one fibre to another. Physical agents

become stimuli for nerve terminals by transferring energy from the external world to the nerve terminals.

3. Thus all nerve cells connect with each other. There are millions of these connecting nerve cells. Thus a stimulus from any part of the body can reach any other part of it. In the spinal cord and brain, the nerve cells connect with each other by their connecting fibres. Outside the spinal cord and brain, certain long fibres are grouped together forming nerves. Each nerve is made up of thousands of nerve fibres together in a bundle, as a cable is made up of separate wires.

The Brain Centre of the Nervous System

4. We know the nerves to carry impulses to the brain. We know that the brain sends these impulses along so that they go to the right place. The brain is made up of three parts. The cerebrum sits like a cap on the cerebellum. And the medulla is that long portion connecting the brain with the spinal cord. The cerebrum has certain parts that do certain work. Studying human beings with accidential injuries of brains helped scientists to get information about these areas. For instance they have discovered that the part for thought,

memory, and feeling is found in the front of the cerebrum. The part for hearing is found at the side of the cerebrum, and the part for sight in the back of the cerebrum.

5. Many experiments have shown that the brain is the centre of feeling and understanding. The nerve cells in the brain can be «put to sleep» with ether or other anesthetics. Then the brain does not feel any impulses from the part being operated on. Sometimes the nerve cells near the part of our body being treated may be deadened by novocaine, as

when the dentist pulls a tooth. What the novocaine does is preventing the impulses from getting to the brain from the nerve in the tooth.

6. The cerebellum is the centre for making your muscles work as a team. The medulla is the centre of certain of our most important acts: breathing and heartbeat, on which life itself depends. The medulla is also capable of controlling acts such as swallowing and yawning.

Упражнение 6. Переведите письменно абзацы 5 и 6 текста А.

Упражнение 7. Найдите в тексте А ответы на следующие вопросы и зачи- тайте их.

1. What do we know about the structure of the nerve cell? 2. How does a nerve react to a stimulus? 3. How many parts is the brain made up of? 4. What have scientists found out about the brain?

Упражнение 8. Прочтите и переведите следующие предложения, выбрав одну из данных ing-форм, подходящую по смыслу.

reacting, responding, combining, descending, controlling, containing, cooling, warming

1. A large number of narcotics or anesthetics produce depression by... directly wtith protoplasm. 2. ... decreases and ... enhances excitability. 3. The human auditory receptors are capable of ... to a range from 16 to 20 000 molecular vibrations. 4. Electromagnetic vibrations include in ... order: hertzian, infra-red, visible, ultra-violet, roentgen, gamma and cosmic rays. 5. Nerves placed in solutions ... carbohydrate and fat cause a decrease in both of these foodstuffs. 6. Cerebellum is the higher centre for ... equilibrium.

Упражнение 9. Переведите следующие предложения с ing-формами на

русский язык, определите их функции.

1. The intensity of an impulse arising during the relatively refractory period is less and it decreases when passing through a depressed stretch of nerve. 2. Functional nerve block can be produced without cutting or injuring the fibres permanently. 3. Among the outstanding symptoms found in cerebellar disease, ataxia (i.e. the inability of maintaining equilibrium through failure of muscular coordination) received a great deal of attention. Thus, a cigarette may be raised to the eye or a spoon may reach the ear and the patient (with cerebellar disease) is quite incapable of easily touching the tip of his nose when the eyes are closed. 4. Extensive pathological changes or injury of the brain, including the frontal

lobes, cause both in man and animal disturbances and abnormalities such as torpidity, inertia, inattention, indifference to surroundings, etc.

Часть II Слова к части II

Упражнения

Упражнение 1. Прочтите и переведите следующие слова.

classification, to classify, equilibrium, cutaneous, to distribute, corpuscle, reflex, stimulus

Упражнение 2. Найдите в данном ряду слово, синонимичное данному в начале ряда.

1. sense - feeling, sense organs, faculty, sensation; 2. to excite - to cause, to respond, to arouse, to stimulate; 3. completely - partially, always, fully, at last, to the end; 4. to augment - to decrease, to increase, to stop, to stimulate

Упражнение 3. Найдите слово, перевод которого дан в начале ряда.

1. знакомый - famous, known, near, close, familiar; 2. ощущение, восприятие - sense, sensibility, sensation, sensationism; 3. усталость - hunger, thirst, fatigue, tired; 4. спускаться - to ascend, to come down, to go down, to descend

Упражнение 4. Прочтите текст B (10 мин). 1) Скажите, какие органы чувств описаны в тексте. Опишите механизм мышечных ощущений. 2) Найдите и переведите предложения с ing-формами.

Text B Classification of the Senses

Sense organs are specialized endings of the sensory division of the peripheral nerves.

We are commonly thought to possess five senses. Actually, there are many more. We may classify them as follows: 1) the cutaneous senses -

touch, heat, cold and pain; 2) the deeper senses - pressure and muscle sense; 3) the internal senses, or senses from the internal organs of the body; 4) the special senses, or those in which the receptors lie in special organs - sight, hearing, equilibrium, taste and smell; and finally 5) the general body senses - hunger, thirst, fatigue, sexual sensation, etc.

The cutaneous senses. There are said to be 500,000 touch receptors in the skin. They are unevenly distributed, being most numerous in the finger tips, lips and tongue, and least numerous on the back. Their receptors are specialized structures called Meissner's corpuscles. The sense-organs for cold constitute 150,000 receptors; they are the endorgans of Krause. Warmth has about 16,000 receptors, the end-organs of Ruffini; and pain has some 3,000,000 receptors. Pain receptors, however, are not specialized; they are simply the naked ends of the pain nerves, somewhat branched at their terminals. The Pacinian corpuscles are the receptors for pressure, and the muscle spindles for muscle sense.

Proprioception. Everyone knows what pain and touch are, but proprioception («muscle sense») may be less familiar. It is a very important sense since it is the sensory link of a reflex controlling muscle tone and contraction; and it also gives the brain important information about the location or position of the limbs. Muscle spindles are tiny, spindle-shaped structures scattered throughout muscles, and they are most numerous around the tendons and joints. The stimulus exciting them is muscle contraction and joint movement.

Since muscles are never completely at rest - one portion or another is contracting all the time - there is a constant flow of nerve impulses into the spinal cord over the muscle sense fibres. Any activity of muscles, such as walking, augments the flow. Let us analyze the fact of walking. One foot is lifted from the ground, moved forward, and, as it descends, the weight of the body is shifted to this foot. The other foot is then lifted, moved, etc. Once a child has learned to walk, he accomplishes this action not noticing it; it is done reflexly, and this reflex is one in which the sensory information comes over the fibres of proprioception.

At any instant of time, the spinal cord is receiving information as to the immediate, present location of the feet and legs, and it is sending out, over motor fibres, impulses which continue the activity. At any time, a person knows, without looking, approximately where his feet are and where his legs are, since this information is also being sent to the brain.

Упражнение 6. Прочтите данные суждения. Найдите в тексте предложения, более полно выражающие мысль данных суждений.

1. There are more senses than we are commonly thought to possess. 2. Besides touch receptors there are cold, warmth and pain receptors.

3. Proprioception is the sensory link of a reflex. 4. Muscle contraction and joint movements excite muscle spindles. 5. Walking augments the flow of impulses. 6. The spinal cord and the brain regulate motor activity.

Упражнение 7. Передайте основное содержание текста В письменно.

Упражнение 8. Назовите наиболее важные центры головного мозга. Проверьте себя по рис. 13.

Часть III

Контрольно-обобщающие упражнения к уроку 13

Упражнение 1. Найдите герундий в данных предложениях. Переведите предложения.

1. The brain is the primary centre for regulating and coordinating body activities. 2. Man receives his information concerning the outside world through his sense organs. 3. We know of the position of an arm or a leg without looking at it. 4. The nerves are trunks containing many nerve fibres which are incased in a common sheath. 5. The conditioned reflexes discovered by I.P. Pavlov are the mechanism through which the body responds to the outside world in avoiding injury, obtaining food and performing many more complex acts. 6. The best method in this case is removing one adrenal totally and rendering the medulla of the other non-functional by cutting the splanchnic nerves.

(Ответ: 1, 3, 5, 6. Если вы ошиблись, повторите ? 23 Грамматического справочника.)

Упражнение 2. Найдите в следующих предложениях: а) герундий; б) при- частие; в) отглагольное существительное.

1. The brain has many different parts controlling different aspects of the body functions. 2. The cerebellum is located beneath the posterior part of the cerebrum, its function being to aid in the coordination of voluntary movements and to maintain balance and muscular tone. 3. The thalamus monitors the sensory stimuli we receive by suppressing some and magnifying others. 4. Professor told us about diagnosing the hypophisis disfunctions. 5. The proprioceptors in the muscles not only supply information on the condition of the muscles, but aid in controlling the energy and extent of muscular activity. 6. Paralysis often results from the plugging up of blood vessels, and consequent arrest of blood supply to an area of the brain.

(Ответ: а) 3, 4, 5; б) 1, 2; в) 6. Если вы ошиблись, повторите ? 24 Грамматического справочника.)

Упражнение 3. Переведите следующие пары слов.

1. a shoulder - to shoulder; 2. a load - to load; 3. a look - to look at...; 4. a sign - to sign; 5. a dream - to dream; 6. an aim - to aim

(Ответ: 1. плечо-брать на себя, взваливать на плечи; 2. груз - нагружать; 3. взгляд - взглянуть на...; 4. знак - подписывать; 5. мечта (сон) - мечтать (видеть сон); 6. цель - целиться, направлять.

conclusion

- What was you home task for today?

Who is ready? Come to the blackboard.

- Have you any questions? What is “to be”? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to …

- You home task is to learn new words retell the text

Lesson 22

- **Topic of the lesson**: Viruses.Bakteria.
- **Objectives:** 1. to introduce students to new material
  2. to do exercises using will should would
  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What’s news? Ok, lets begin our lesson than.

I have a tongue twister for you.

Whenever the weather is cold.
Whenever the weather is hot.
We’ll whether the weather,
Whatever the weather,
Whether we like it or not.

- **Teaching / learning activities**
  - **Instructions**

VIRUSES. BACTERIA

1. Условные предложения (? 31)
2. Различные функции глаголов **shall, will, should, would** (? 33)

Часть I

Слова к части I

disease [dɪ′zi:z] *n* заболевание, болезнь
particle [′pɑ:tɪkl] *n* частица
expect [ɪks′pekt] *v* ожидать, предполагать
hereditary [hɪ′redɪtərɪ] *a* наследственный
facilitate [fə′sɪlɪteɪt] *v* облегчать, способствовать
core [kɔ:] *n* ядро

Упражнения

Упражнение 1. Переведите следующие условные предложения на русский язык.

1. The experiment would be ready by the end of the month if they supplied us with all the necessary material on the problem. 2. If a transverse section is made through the cerebral hemispheres, the inner white matter and the embedded grey matter may be observed. 3. All sensations such as touch, pain and temperature are lost if cerebral hemispheres are destroyed. 4. If a piece of ice were placed against the skin, it would cause a sudden change in environment of the body and the sensation of cold would result.

5. If a man touches hot water, he quickly withdraws his hand.

Упражнение 2. Напишите данные предложения так, чтобы они выражали маловероятное предположение.

Образец: If they *get* all the necessary material, they *will be able* to go on with their experiment. If they *got* all the necessary material, they *would be able* to go on with their experiment.

1. If an object passes in front of the eyes, the changes in the intensity of the light stimulate the nerve endings in the eye. 2. If food is taken into the mouth, stimulation of the various receptors in the mucous membrane brings about reflex secretions. 3. If one can make a nerve connection between the sensitive receptor cells of the ear and the area in the brain associated with sight, it will be possible to perceive, or «see» sounds.

Упражнение 3. Напишите данные предложения так, чтобы они выражали упущенную возможность совершить действие.

Образец: If the doctor *knows* the reason of the patient's trouble, he *will help* him immediately. If the doctor *had known* the reason of the patient's trouble yesterday he *would have helped* him immediately.

1. If the cerebral cortex in this animal is completely removed, no connection reflexes will be formed at all. 2. If she takes part in the conference, she will make a good report. 3. If we use new apparatus, we shall save much time. 4. If the surgeon on duty does not operate patient N., serious complications may result.

Упражнение 4. Переведите следующие предложения с глаголами **shall, will, should, would.**

1. If you ascend in the atmosphere as in flying an airplane, climbing a high mountain, or riding a fast elevator, the atmospheric pressure, and that in the outer ear, will drop, while that in the middle ear remains the same. 2. Damage to one side of the brain will cause paralysis on the opposite side of the body. 3. He said he would prepare the report on the functions of sense organs. 4. They shall attend this lecture by all means. 5. There are certain aspects in the differential diagnosis which should be considered whenever headache is found to be a distressing complaint in a patient. 6. He would work in the Anatomi- cal Museum if he were free.

Упражнение 5. Прочтите и переведите данные гнезда слов.

1. to expect, expectable, expectance, expectant; 2. to facilitate, facilities, facility; 3. heredity, hereditary, hereditarily; 4. part, partial, particle

Упражнение 6. Прочтите и переведите следующие словосочетания.

infectious desease, diseases of childhood, to suffer from a disease, disease incidence, an expectant mother, a hereditary disease, partial pressure

Упражнение 7. Просмотрите текст А и скажите, что было известно о вирусах до изобретения электронного микроскопа и что нового узнали о вирусах после его изобретения.

Text A Viruses

1. For three-quarters of a century, scientists have known that many diseases of man, animals, plants and even of microorganisms are caused by transmissible agents which cannot be seen under the light microscope, they are so small that they can pass through filters fine enough to hold back the most minute bacteria. These mysterious invisible agents were given the generic name of viruses. In the 1930's, two great discoveries were made which provided concrete informa- tion concerning the nature of viruses. It was found that some of them would be crystallized almost as readily as if they were ordinary chemical substances.

2. Chemically, the active virus particles were found to behave like giant molecules. At about the same time, the electron microscope became available and permitted pictures to be obtained of these crystals as well as of particles present in fluids and other materials having virus activity. Viruses would now be seen as concrete objects instead of being merely imagined.

3. The first unexpected fact revealed by electron microscopy was that the various viruses differ among themselves in shape and in size, as various types of bacteria. The virologist can differentiate between several types of viruses on the basis of their size and shape as revealed by electron micrographs. For example, the vaccinia virus is rather large. In contrast, the polioviruses are much smaller and yield very characteristic crystals. As to the tobacco mosaic virus, it can be

crystallized in the form of thin needles having different lengths. The viruses that attack bacteria, which are called bacteriophages, are more complex, at least in
shape. Many of them have a thin tail and a large round or cylindrical head. Each active virus particle consists of at least two very different types of structural components. One structure made up of nucleic acid, carries the genetic hereditary characteristics of the virus. Another, protein in nature, is thought to protect this genetic apparatus and to facilitate its transfer from one infected cell to another. For example, electron micrographs revealed that virus of tobacco mosaic consisted of an inner constituent of nucleic acid lodged within an outer coat, cylindrical in shape and made up of protein. The central structure, the core, should be compared to the nucleus of ordinary cells in higher organisms, which also contains large amounts of nucleic acid and also carries the genetic endowment. In fact, the nucleic acid core of this virus is its most essential constituent. However, proteins and nucleic acids are not the only structural components of active viruses. Certain viral particles have recently been shown to contain lipids as part of their essential structures. High-magnification electron micrographs will reveal furthermore that some of them possess a distinct membrane. If we examined the structure of some of bacteria under highmagnification electron microscope we should see that they possess a distinct membrane.

Упражнение 8. Прочтите и переведите текст А. Первый и второй абзацы переведите письменно.

Упражнение 9. Найдите в тексте А ответы на следующие вопросы.

1. What have scientists known about viruses until the electrone microscope became available? 2. What two great discoveries were made in the 1930's? 3. Can the virologists differentiate between the types of viruses on the basis of their size or shape? 4. Are proteins and nucleic acids the only structural components of active viruses?

Упражнение 10. Составьте письменно план текста А.

Упражнение 11. Найдите в каждом абзаце текста А предложение, выражающее основную мысль данного абзаца, и переведите его.

Упражнение 12. Найдите в каждом ряду слово, синонимичное по значению первому слову ряда.

1. ordinary - everyday, common, usual, often, habitual; 2. to reveal- to detect, to open, to find, to show, to demonstrate; 3. remarkable - usual, seldom, unusual, interesting; 4. material - findings, essence,data, evidence, matter

Упражнение 13. Найдите в каждом ряду слово, противоположное по значению первому слову ряда.

1. inner - outside, out, outward, outer; 2. different - some, equal, something, the same; 3. to facilitate - to prevent, to hamper, to influence, to ignore; 4. within - out, outward, outer, out of, outside

Упражнение 14. Переведите следующие предложения. Определите функции глаголов: **shall, should, will, would.**

1. The most obvious properties of the ultramicroscopic viruses should be classified according to a) their invisibility with ordinary microscope; b) their refusal to multiply in artificial media; c) their ability to pass filters which hold back the smallest known bacteria. 2. In 1892 D. Ivanovski found that the sap of leaves attacked by mosaic disease would retain its infectious qualities even after filtration. 3. Before the middle of the nineteenth century the word «virus» would be commonly applied to all toxic or poisonous substances. 4. If you examined viruses in the electron microscope, you would see that the particles of each type of virus possessed a characteristic shape and size. 5. If the strains of virus to which people are subjected are too different from those in the vaccine, the vaccine will become useless. 6. They shall improve their method of investigation if they want to obtain good results.

Упражнение 15. Переведите на английский язык данные предложения письменно.

1. Вирусы вызывают заболевания у людей, растений и даже микроорганизмов. 2. Вирусы табачной мозаики образуют крис- таллы в форме тонких иголок различной длины. 3. Некоторые вирусы, как показали последние исследования, в своей структуре помимо белка и нуклеиновой кислоты содержат липиды и оболочки.

Часть II-Слова к части II

consequently [ˈkɔnsɪkwəntlɪ] *adv* следовательно, в связи с этим
distinction [dɪsˈtɪŋkʃn] *n* отличие, разграничение
moisture [ˈmɔɪstʃə] *n* влага
pollute [pəˈluːt] *v* загрязнять
pollution [pəˈluːʃn] *n* загрязнение

Упражнения

Упражнение 1. Прочтите и переведите следующие слова.

destructive, microorganisms, chlorophyll, spores, to vary, variety, ocean, especially, polluted, alkaline, reservoir, mucus, mucous

Упражнение 2. Дайте исходные слова, от которых образованы следующие производные. Переведите их на русский язык.

1. occurrence, occurrent; 2. moisten, moisture, moistureless; 3. distinctly, distinction, distinctive, distinctively

Упражнение 3. Прочтите текст текст В (10 мин). 1) Разделите его на 2 части соответственно вопросам:

1. What are bacteria?

2. Where do they occur?

2) Найдите и переведите: а) условные придаточные предложения, которые выражают маловероятные предположения; б) предложения с многозначными глаголами **shall, will, should, would.**

Text B What are Bacteria?

Bacteria rule the world. Man is dependent upon them from the day of his birth until the hour of his death. They are man's most useful servants and his most destructive masters. One is prone to ask: What are bacteria? Where do they occur? What are their functions?

Bacteria are minute single-celled living beings devoid of roots, leaves and stems. They are so small that they can be seen only with the aid of a powerful microscope; They are often spoken of as microorganisms. This term includes not only bacteria but all forms of life so small that you should require the microscope in their study. They are often referred to as germs or microbes. The early investigators considered them animals and would refer to them as «animalcules».

If we examined the bacteria we should find that they have many of the characteristics of animals. Some have the power of independent motion. All are devoid of green colouring matter, chlorophyll; most of them are compelled to live upon complex foods as do the animals. Their general structure, their methods of growth, their formation of threads and spores, and their simplicity in some of the lower forms of plant life, have caused the biologist to class them as plants. However, it is impos-

sible to make a clear-cut[1] distinction between some microscopical plants and some microscopical animals. The important thing to remember is that bacteria are the simplest forms of life, and partake of the characteristics of both plants and animals. For this reason, and for convenience, scientists agree to consider the bacteria with the plants.

Where do bacteria occur? Bacteria are widely distributed, occurring nearly everywhere. They are found in all natural soils, the number varying with the kind of soil, quantity of plant and animal debris present, moisture and treatment. They decrease in number with depth. Although they occur in air, it is not their natural home as under ordinary conditions they cannot grow and multiply in it. The number and variety found in air vary. The atmosphere of some high mountains and the air over the ocean far from shore may be free from bacteria. City and country air also differ from each other in the number and kind of bac- teria which they contain. There is a great variation in the air of buildings. Bacteria are especially numerous where dust is plentiful. Most natural waters contain many bacteria. In sewage and polluted waters[2] they are especially numerous. If measures against pollution and contamination of water were not taken in time there

would be much danger to people's health. They occur only in small numbers or not at all in deep wells[3] and springs.[4] A turbid stream, which contains the drainage of many cities, has a great variety and number of bacteria in opposition to the clear, rapid flowing water of uninhabited mountainous regions.

The intestines, owing to their alkaline reaction and the partly digested condition of their contents, are a great reservoir of bacteria. In the upper part there are few, but in the descending colon billions of bacteria are present. Sometimes they constitute one third of the total dry contents of the intestine. The health of the individual is determined by the number and kind of bacteria.
The normal tissues and the blood of animals are usually free from bacteria. If ordinary saprophytic bacteria entered the animal's body they would be ingested and destroyed by leukocytes. Microorganisms are rarely found on certain healthy mucous membranes, such as those of the kidneys, bladder and lungs. Occasionally they pass through the skin or the mucous membranes of the digestive tract after which they may be found for a short time in the blood. In certain diseased conditions the blood and tissues of man and lower animals become filled with bacteria.
Functions of Bacteria. The real significance of bacteria comes in the fact that we are living in a world filled with them. They cannot be kept out of the
alimentary tract. Considerable attention should be given to the favouring of the beneficial bacteria in man. The great Russian bacteriologist Mechnikov claimed that the rate with which man ages would be determined not by the years he has lived, but by the bacteria, which inhabit his digestive system.
Упражнение 4. Составьте схему распространения бактерий в природе. Расскажите о присутствии бактерий в природе, используя текст и схему.
Упражнение 5. Найдите в тексте предложения, более полно выражающие мысль данных суждений.
1. Man is dependent upon bacteria. 2. Bacteria are very small. 3. Bacteria are often spoken of as microorganisms. 4. They have many characteristics of animals. 5. Some characteristics of bacteria have caused the biologist to class them as plants. 6. We are living in a world filled with bacteria.

Часть III

Контрольно-обобщающие упражнения к уроку 14

Упражнение 1. Найдите условные придаточные предложения, которые выражают: а) маловероятное предположение; б) упущенную возможность совершить действие. Переведите предложения.

1. If you observed bacterial protoplasm under the optical microscope, it would appear simple in structure. 2. If the individual were in a healthy state, a large quantity of virulent microorganisms entering the body would be destroyed. 3. Certain water forms of bacteria, would die, if they were held above 30?C for more than a few minutes. 4. If bacteria had entered the body at the time of its active and unweakened condition they would have given it a very mild form of the disease. 5. It certian hygienie measures had been carried out we should have prevented the last year fatal epidemics.

(Ответ: а) 1, 2, 3. б) 4, 5. Если вы ошиблись, повторите ? 31 Грамматического справочника.)

Упражнение 2. Укажите, в каких предложениях слова **shall, will, should, would** имеют модальное значение. Переведите эти предложения.

1. Great care should be taken in cultivating bacteria. 2. The water should be kept clean by filtration and safe by desinfection with chlorine
to destroy pathogenic and other forms of bacteria. 3. Pasteur could not believe that two compounds which acted so differently in one respect would be absolutely identical in every other way. 4. In the investigation of yellow fever it became necessary to find human volunteers who would risk contracting yellow fever. 5. They shall correct their mistakes themselves. 6. It will be difficult to diagnose this case.

(Ответ: 1, 2, 4, 5. Если вы ошиблись, повторите ? 33 Грамматического справочника.)

Упражнение 3. Дайте форму множественного числа от следующих слов:

bacillus, bacterium, coccus, foot, virus, genus, spirillum **(Ответ:** bacilli, bacteria, cocci, feet, viruses, genera, spirilla.)

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? What is “to be going + infinitive”? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.
- You home task is to learn new words translate the text

Lesson 23

- **Topic of the lesson**:osteomyelitics.fractures.
- **Objectives:** 1. to give instructions
  2. to do exercises using active and passive voice
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Betty bought some butter,
But the butter Betty bought was bitter,
So Betty bought some better butter,
and the better butter Betty bought
Was better than bitter butter Betty bought
Before

- **Teaching / learning activities**
  - **Instructions**

Lesson 24

- **Practice**

OSTEOMYELITIS. FRACTURES

Повторение: Времена группы: Indefinite (Active and Passive Voice) (?? 10, 14)

Часть I

Слова к части I

Упражнения

Упражнение 1. Найдите и определите время и залог глаголов-сказуемых в следующих предложениях.

1. The earlier investigators of bacteria thought of them as tiny animals which were generally grouped together with the microscopic animals called protozoans. 2. Probably the bacteria are made up of various kinds of organisms, some are related to algae, others to fungi. Future research will doubtless throw more light on such relationship. 3. Before the middle of the nineteenth century, the word «virus» was commonly applied to all toxic or poisonous substances, including snake venom. 4. Viruses are distinguished from poisons and venoms because of their infectious quality. 5. In addition to smallpox and yellow fever, viruses cause such human diseases as mumps, measles, poliomyelitis, chicken pox, Japanese B encephalitis, infectious hepatitis, influenza and probably the common cold.

Упражнение 2. Прочтите первый абзац текста А. Обратите внимание на произношение медицинских терминов.

Упражнение 3. Образуйте производные слова согласно данной модели и переведите их.

Существительное + -ed = прилагательное: mark знак, метка, след; черта; известность - marked отмеченный, заметный; значительный, известный.

fur (мех; налет на языке); bruise (синяк); fracture (перелом); disease; dress

Упражнение 4. Прочтите и переведите данные однокоренные слова.

1. distant, distance, distantly; 2. evident, evidence, evidently; 3. to inflame, inflamed, inflammable, inflammation; 4. to suppurate, suppurative, suppuration; 5. severe, severely, severity; 6. region, regional

Упражнение 5. Прочтите и переведите следующие словосочетания.

X-ray evidence, inflammation of lungs, abdominal region, regional operation, severe pain, attack of coughing, to be severely ill

Упражнение 6. Просмотрите текст А и назовите основные симптомы ос- трого остеомиелита.

Text A Acute Osteomyelitis

1. In this text we shall discuss the signs and symptoms of acute osteomyelitis, an infectious suppurative disease affecting bones.

Osteomyelitis is generally caused by Staphylococcus, which reaches the bones via the blood stream from a distant focus, often a throat infection. Its rise was especially sharp during World War II, particulary in 1942-46 when the lack of due antibiotics made the disease uncured.

2. The disease generally affects the upper end of tibia or lower end of femur. The infection is followed by intense reaction, with pus formation in the marrow spaces. From there the suppuration spreads along the marrow cavity and also through the cortex, to erupt on the surface and form a subperiosteal abscess. In some cases the marrow cavity is widely involved; in others, on the contrary, there is a large subperiosteal abscess, but little or no pus within the bone.

3. Almost always part of bone becomes necrotic, due to the toxic effect of pus under tension and to obliteration by the subperiosteal abscess of the periosteal vessels supplying the bone cortex. The main nutrient artery itself may be thrombosed, leading to necrosis of the major part of the bone.

4. Acute osteomyelitis generally affects children, especially if in poor health, after an infectious fever. Sometimes there is a history of minor injury to the part a few days before the onset of acute symptoms.

5. In a typical case the onset is sudden. Then pain and inflammation of the bone are accompanied by marked toxaemia. The temperature rises, often to 103? or 104? F, the face is flushed and the tongue is furred. The leucocyte count rises to 20.000 or more. Delirium is frequent. The pain is severe. The limb is held immobile. The skin over the inflamed region is hot and red, and dilated veins may be evident. Slight superficial edema appears early. Localising signs develop early in the case of a superficial bone such as the tibia, later if the bone is deeply placed.

6. Acute osteomyelitis is a dangerous disease, especially when it affects a deep-seated bone, such as the upper end of the femur, pelvis or vertebrae. In those who survive the acute phase the disease often persists as chronic osteomyelitis. Eventually complete restoration of functions and general health will be expected in most cases, when appropriate treatment is applied.

Упражнение 7. Прочтите и переведите текст А. Абзац 5 переведите письменно.

Упражнение 8. Найдите в тексте А ответы на данные вопросы.

1. What kind of diseases is osteomyelitis. 2. When was its rise especially sharp? Why? 3. What is osteomyelitis caused by? 4. Where does the infection localize? 5. What is the course of the disease? 6. How does the disease begin in a typical case? 7. Does the disease persist as a chronic one or is complete restoration of functions and general health possible?

Упражнение 9. Переведите данные предложения. Определите, какой частью речи являются выделенные слова.

1. The disease generally affects the upper end of tibia or lower end of femur. 2. The infection is followed by intense reaction, with pus formation in the marrow spaces. 3. Almost always part of the bone becomes necrotic, due to the toxic effect of pus under the tension. 4. The main nutrient artery itself may be thrombosed. 5. In those who survive the acute phase the disease often persists as chronic osteomyelitis.

Упражнение 10. Найдите в каждом абзаце предложения, выражающие основную мысль данного абзаца. Выпишите их.

Упражнение 11. Найдите в каждом ряду слово, синонимичное по значению первому слову ряда.

1. distant - obvious, remote, far-away, distinct, close; 2. to involve - to invent, to include, to invite, to affect; 3. to spread - to go over, to divide, to distribute, to cover, to scatter; 4. onset - attack, beginning, process, turning-point; 5. severe - low, short-turn, acute, chronic; 6. region - locality, district, area, part, partition

Упражнение 12. Найдите в каждом ряду слово, противоположное по значению первому слову ряда.

1. acute - dye, due, dull, dry; 2. minor - main, general, major, important; 3. evident - unclear, obscure; 4. appropriate - unsuitable, unfitting, common; 5. deeply - above, outside, superficially

Упражнение 13. Поставьте глаголы-сказуемые в форму действительного залога.

1. Acute osteomyelitis is generally caused by Staphylococcus aureus. 2. The infection was followed by intense reaction with pus formation in the marrow spaces. 3. After hospitalization he was prescribed appropriate treatment at home by his family doctor. 4. The wound will be dressed by her every second day.

Упражнение 14. Переведите следующие предожения на английский язык письменно.

1. Ее отправили в больницу два дня назад. 2. Доктор сказал, что нужна срочная операция. 3. При остеомиелите поражаются кости. 4. Гипсовую повязку снимут через три дня. 5. Рана зажила и больному разрешили двигаться. 6. При остеомиелите в костном мозге образуется гной.

Часть II Слова к части II

Упражнения

Упражнение 1. Прочтите и переведите следующие слова.

communication, position, to restore, correct, to protect, irregularly, especially, to fix

Упражнение 2. Найдите в данном ряду слово, значение которого дано в начале ряда.

1. повреждать (наносить ущерб) - to wound, to hurt, to damage, to harm; 2. заживлять - to cure, to restore, to heal, to treat; 3. выпол- нять (завершать) - to fulfil, to complete, to finish; 4. рвать, ранить - to separate, to lacerate, to tear

Упражнение 3. Назовите корневые слова, от которых образованы данные производные, и переведите их на русский язык.

1. relation, relationship, relative, relatively; 2. tenderly, tenderness, tender-hearted; 3. swelling, swelled; 4. dressed, dressing

Упражнение 4. Прочтите текст B (10 мин). 1) Скажите, какие типы переломов описаны в тексте. 2) Найдите в тексте предложения с глаголом- сказуемым в действительном и страдательном залоге. Укажите время сказуемого. 3) Переведите предложения.

Text B Fractures

A fracture is a broken bone. There may be different types of fractures. A closed or simple fracture results from an injury which breaks a bone without causing any external wound at the site of the break. In case of an open or compound fracture there is a wound of the skin at the site of the fracture, and this will allow communication between the outside air and the broken bone, therefore it is «open». When the sharp ends of a broken bone damage an internal organ such as the brain or lungs, this is known as «complicated fracture».

In compound fractures early and prompt healing with good function will be obtained only by early repositions in correct position. This is necessary not only to restore the bone structures, but to place the soft parts in relationship for correct function as well. All compound fracture patients must be protected against movement, muscle spasm, and loss of position. This is accomplished by fixation of fracture fragments in plaster of Paris casts1 or in any other way. Frequent dressing of wounds in compound fractures is unnecessary.

What are the symptoms and signs of a fracture? Shock is always present in some degree with any fracture. Sometimes it may be severe. Pain and tenderness at the site of fracture is quickly followed by bruising and swelling. Bleeding is frequent in case of an open fracture. Irregularity on the surface of the bone may also be seen, e.g. on the collar-bone or the bone of an arm. In an open fracture the ends of the broken bone may be sticking out of the wound. A person's leg which was broken may be turned underneath him with the foot turned round the wrong way. The bones of the leg may be bent in a place where there is no joint, e.g. between the knee and the ankle if both bones of the leg are broken.

First-aid treatment of fracture. Lay the patient down. This will lessen shock. If there is a fracture of the skull raise the patient's head and shoulders a little and support them. Stop bleeding if the fracture is open, and apply a dressing. In all open fractures there is some bleeding, but it can

generally be stopped by putting on a dressing. If bleeding continues, it is necessary to use indirect pressure, especially if the bleeding is from an artery.

Fix the damaged part so that any movement by the patient cannot cause the broken bone to move, as this will increase the deformity, cause great pain and make shock worse.

Notes

1. plaster of Paris cast гипсовая повязка

Упражнение 6. Найдите в тексте предложения, более полно выражающие мысль данных суждений, и прочтите их.

1. There may be different types of fractures: closed, open, complete. 2. In compound fractures early healing may be obtained. 3. Compound fracture patients must be protected against movement. 4. Bleeding should be stopped. 5. Fix the damaged part.

Упражнение 7. Передайте основное содержание текста B.

Часть III

Контрольно-обобщающие упражнения к уроку 15

Упражнение 1. Укажите, в каких предложениях глагол стоит в страдательном залоге.

1. The bones of the leg were bent between the knee and the foot. 2. In all open fractures there is some bleeding. 3. Roentgenograms revealed new bone formation. 4. The fractures are caused by direct violence and indirect violence. 5. Pain and tenderness in the bone were followed by bruising. 6. The patient's leg was held immobill.

(Ответ: 1, 4, 5, 6. Если вы ошиблись, повторите ? 4 Грамматического справочника.)

Упражнение 2. Определите, в каких предложениях глагол to be является: а) частью страдательного залога; б) глаголом-связкой.

1. If the limb is distorted consult a traumatologist. 2. In patients with broken bones in an arm or hand the affected limb is secured to the body with bandages. 3. One of the patients was a boy of ten with complaints of pain in both arms. 4. It was necessary to apply plaster of Paris cast at once. 5. The bleeding was stopped by putting on a dressing. 6. The diagnosis of a complicated fracture was made and the girl was directed to the traumatological department. 7. Doctor N. was particularly attentive to the man with a comlicated fracture.

(Ответ: а) 1, 2, 5, 6; б) 3, 4, 7. Если вы ошиблись, повторите ? 15 Грамматического справочника.)

Упражнение 3. Выберите правильные значения выделенных слов.

1. They dreamed of (мечтали, видели во сне) becoming surgeons after they graduated from the Institute. 2. They learned (учить, изучать, узнавать) that their group would begin their practical studies on Friday. 3. Their practical studies in surgery will begin at the surgical department (кафедра, факультет, отдел, отделение).

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.

- You home task to retell text learn by heart new words

Lesson 24

- **Topic of the lesson**: Coronary Heart Diseases
- **Objectives:** 1. to introduce students to new material
  2. to do exercises using active and passive voice
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk

- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

I thought a thought.
But the thought I thought wasn't the thought
I thought I thought
If the thought I thought I thought had been the thought I thought ,
I wouldn't have thought so much.

- **Teaching / learning activities**
  - **Instructions**

. CORONARY HEART DISEASES

Повторение: Времена группы Perfect (Active and Passive Voice) (?? 12, 14)

Часть I

Слова к части I

Упражнения

Упражнение 1. Найдите глаголы-сказуемые в следующих предложениях. Определите их время и залог.

1. The marked increase in patients entering emergency rooms in hospitals has resulted in a need for increasing facilities in almost every hospital. 2. The patient was examined for an injury to his leg which had been broken in an automobile accident. 3. Four weeks later the deep abrasions of the thigh were skin grafted. 4. If a bone in the forearm is broken the splint must reach above the elbow and extend below the wrist. 5. For thousands of years mankind had accumulated knowledge in surgery, but real development in this field of medicine started only in

the 19th century. 6. By the end of the week we shall have explored surgically the posterior tibial artery.

Упражнение 2. Образуйте 2 пары предложений от данных ниже: а) с глаголом-сказуемым в Present Perfect (Active, Passive); б) с глаголом- сказуемым в Past Perfect (Active, Passive) согласно образцу.

Образец: The nurse (to dress) the patient's wound.

1. The nurse has dressed the patient's wound. The pa- tient's wound has been dressed by the nurse.

2. The nurse had dressed the patient's wound. The pa- tient's wound had been dressed by the nurse.

1. The teacher (to demonstrate) open fracture of the thorax. 2. The physician (to examine) the boy with osteomyelitis. 3. He (to apply) plaster of Paris cast. 4. The students (to see) patients with a complicated fracture.

Упражнение 3. Прочтите и переведите следующие слова и словосоче- тания.

heart, coronary, contraction, approximately, surface, diabetic, per cent, angina pectoris, obesity, fortunately, degenerative, severity

Упражнение 4. Запомните значение суффикса -ness. Образуйте существительные от следующих прилагательных согласно модели и переведите их.

Прилагательное + -ness = существительное со значением качества или состояния: acute острый - acuteness острота. ill, sick, excessive, distinctive, calm

Упражнение 5. Прочтите и переведите следующие гнезда слов.

1. to expert - experience, experienced; 2. to die - death, deadly, dying; 3. to cease - cessation, ceaseless; 4. to obstruct - obstructive, obstruction; 5. to recover - recovery, recoverable

Упражнение 6. Прочтите и переведите следующие словосочетания.

to recover sight (hearing, voice, one's breath, consciousness); deadborn; to experience pain; an obstruction in the throat

1. The coronary blood vessels surrounding the heart have derived their name from the fact that they encircle the heart like a crown, or corona. These vessels transport almost a half pint of blood every minute over the surface of the heart. Any sudden blockage of one of the coronary arteries deprives that section of the heart of its blood supply. Cardiac cells die, heart contractions may cease, and circulation may come to a standstill. If a coronary artery is completely plugged, the condition is called a coro-

nary occlusion or heart attack. The vascular pathologic disorder itself has been very variable. If the obstruction is only partial or in one of the smaller coronary tributaries, prompt treatment often leads to the individual's recovery. An occlusion in main coronary arteries is very serious and may cause sudden death. Other causes of the coronary disease in-

Fig. 14. Coronary arteries supplying the heart

clude heavy physical exercise, aging, dietary habits, obesity, smoking, or hypertension.

2. Pain which had been developed in the heart may be due to a bloodflow deficiency in the coronary vessels. This is referred to (actually felt in) the left arm and shoulder. Such pain from the heart has been called angina pectoris. Angina pectoris may not actually be noticed until the work load is too great in relation to the flow in the coronary vessels. People who had experienced it repeatedly often do not feel pain unless they experience strong emotion. Others experience it much of the time.

3. Fortunately, the great majority of coronary disease patients will have recovered and have been able to lead active, useful lives, when they receive proper treatment under good medical supervision. There are many preparations which have been effective and are under clinical investigation at the present time.

Heart and Artery Diseases

4. Heart and artery diseases have been presently the number one health problem in the world. Cardiovascular ailments are by far the chief

causes of illness, disability, and death among both middle-aged and elderly people. Among these, coronary heart disease, illness of the blood vessels supplying the heart, is responsible for the greatest number of deaths (over 50 per cent of all cardiovascular diseases). Causes of other cardiovascular disease deaths, in order of decreasing importance, are stroke and hypertension. These three diseases are responsible for more than 80 per cent of all cardiovascular disease deaths.

5. Like cancer and emphysema, heart diseases appear to be related to the extension of the average life span. Certain factors are definitely involved in the high incidence of heart disease - the stress, diets high in saturated fats, the tendency toward obesity with age, lack of sufficient physical exercise, and the incidence of smoking. These factors appear to relate to a higher incidence of heart desease than in societies lacking these characteristics.

6. The severity and danger of heart and artery diseases which we had previously described cannot be minimized; a disease in an arm or leg may cripple a person, but a disease of the heart may lead to his death.

Упражнение 9. Прочтите и переведите текст А. Абзацы 2 и 3 переведите письменно.

Упражнение 10. Найдите в тексте А ответы на следующие вопросы и прочтите их.

1. What kinds of cardiovascular diseases have been discribed in text A? 2. What does the sudden blockage of the coronary artery result in? 3. What are the conditions caused by coronary occlusion? 4. What is angina pectoris? What do people experience in this condition? 5. Why heart and artery diseases have been recently the number one health problem in the world?

Упражнение 11. Составьте письменно план текста А.

Упражнение 12. Передайте основную мысль абзацев 4 и 5 текста А одним- двумя предложениями.

Упражнение 13. Вставьте подходящие по смыслу слова в данные предло- жения: fortunately, approximately, also.

1. ... , the great majority of coronary disease patients recover and are able to lead active, useful lives if they receive proper treatment under good medical supervision. 2. ... one fourth of all deaths in the world result from coronary artery disease. 3. ... it is estimated that more than

one out of every ten persons suffers some degree of insufficiency of blood supply to the heart.

Упражнение 14. Дайте синонимы к следующим словам.

to cease, obstruction, illness, serious, majority

Упражнение 15. Прочтите и переведите текст. Объяшите употребление глагольных времен и залога.

Twenty patients with arterial occlusion have been treated by systematic infusions since May. In many of these patients the obstruction had been present for so long that irreversible changes had already taken place.

Obstruction in eleven patients was of more than twenty-four-hours' duration and in four was more than forty-eight hours old.

Only eight patients were treated within twenty-four to thirty hours of the onset of the obstruction. Of these five (62 per cent) had complete return of circulation. Return of circulation usually occurred after ten to twelve hours of continuous intravenous therapy. It became apparent that even though improvement was obtained by one course of treatment, this did not assure a permanent response. The reasons for this are probably multiple and include: 1) a nidus of thrombus may remain on which complete rethrombosis can develop and 2) intimal damage remains as a source of rethrombosis. For these reasons we have repeated treatment for two to three days with the expectation that all thrombus will be eradicated and the vessel wall will have a chance to repair itself.

Часть II Слова к части II

Упражнения

Упражнение 1. Найдите корневые слова, от которых образованы данные производные, и переведите их на русский язык.

normally, presented, frequently, increasing, imbalance, excessive, weakened

Упражнение 2. Прочтите текст B (10 мин). 1) Назовите симптомы гипер- тонии. 2) Найдите предложения с глаголом-сказуемым в действительном и страдательном залоге в форме Perfect. Укажите время, которым выражены сказуемые. 3) Переведите эти предложения.

Text B Hypertension

Hypertension simply means high blood pressure. As a normal heart pumps blood through the body, a certain degree of pressure is excreted against the blood vessels. With each beat of the left ventricle, a wave ol pressure starts at the heart and travels along the arteries. This wave is called the pulse. The pulse can be felt on any arteries that are close to the surface of the body, such as on the wrist, the sides of the throat and the temple. The pulse results from the blood pressure. The blood pressure at the moment of contraction is the systolic pressure; it should normally be sufficient to displace about 120 mm. mercury in a glass tube. The blood pressure at the moment of relaxation of the heart is the diastolic pressure; it normally displaces about 80 mm. of mercury. Blood pressure readings, which are frequently taken during a general physical examination are presented as a ratio of the first figure over the second. Most physiologists consider the blood pressure reading of 150/90 as excessive. This can be considered a useful definition of high blood pressure.

Hypertension is very common. It is believed that about one out of every five individuals suffers from it and that about 13 per cent of all deaths are a direct result of it. Recently hypertension has become more common with increasing age and now it affects men about twice as often as women.

In about 90 per cent of the known cases, it has been described as essential hypertension, a hereditary condition. In other cases it may be due to the removal of a kidney, kidney disease, excessive narrowing of the arteries, hormone imbalance, or excessive salt in the diet.

It has been known for many years that hypertension is damaging for two reasons: 1) it puts an excess work load on the heart and the left ventricle in particular; 2) the arteries may be damaged by excessive pressure. A hypertensive patient tends to develop cardiovascular ailments much sooner than a person who has not suffered from hypertension.

This high blood pressure in the arteries causes a hardening (sclerosis) of blood vessels all over the body. The vessels become weakened; clots tend to form in them much more easily; some vessels rupture and haemorrhage. For centuries haemorrhage in the vessels of the brain (cerebral haemorrhage) and vessels of the kidneys has been known to be particularly destructive.

Упражнение 4. Найдите в тексте B предложения, более полно выражающие мысль данных суждений, и прочтите их вслух.

1. The pulse results from the blood pressure and can be measured. 2. There is systolic and diastolic pressure. 3. Hypertension is very common. 4. The causes of hypertension may be different. 5. Hypertension is damaging for two reasons. 6. Hypertensive patients have tended to develop cardiovascular ailments.

Упражнение 5. Передайте основное содержание текста B письменно, использовав в качестве плана предыдущее упражнение.

Часть III

Контрольно-обобщающие упражнения к уроку 16

Упражнение 1. Укажите, в каких предложениях глагол-сказуемое стоит во временах группы Perfect.

1. Cardiomyopathy has been defined as «acute, subacute, or chronic disorder of heart muscle of unknown or obscure etiology». 2. Apart from discomfort in his chest he had no history suggestive of myocardial infarction or angina. 3. A patient with a femoral artery embolus had

marked temporary improvement in circulation. 4. The duration of treatment has been increased to a maximum of 16 hours in our patients. 5. The arterial occlusion had recurred by the next morning.

(Ответ: 1, 4, 5. Если вы ошиблись, повторите ?? 12, 14 Грамматического справочника.)

Упражнение 2. Укажите, в каких предложениях глагол-сказуемое стоит в форме страдательного залога.

1. The patient was admitted to the hospital with essential hypertension. 2. The woman responded slowly to diuretic therapy. 3. A loud heart-sound was audible at the mitral area. 4. The patient has been maintained for a year without further episodes of heart-failure. 5. The left ventricle was

grossly dilated with very poor movements of all areas. 6. Gross mitral incompetence had not been suspected clinically previously.

(Ответ: 1, 4, 5, 6. Если вы ошиблись, повторите ? 14 Грамматического справочника.)

Упражнение 3. Переведите данные гнезда слов на английский язык.

1. опыт, испытывать, огштный; 2. умирать, смерть, умерщвлять, смертельно; 3. прекращать, прекращение, непрерывный; 4. непроходимость (закупорка), мешающий, закупоривать; 5. выздороветь, выздоровление

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.

- You home task is to learn new words retell the text

Lesson 25

- Topic of the lesson: respiratory infection
- Objectives: 1. to introduce students to new material
  2. to do exercises using active and passive voice
  3. to develop their outlook

- Materials needed: handouts, teaching techniques, markers, blackboard, chalk
- Introduction

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

The King would sing, about a ring that would go ding.

- Teaching / learning activities
  - Instructions

RESPIRATORY INFECTIONS

Повторение: Времена группы Continuous (Active and Passive Voice) (?? 11, 14)

Часть I

Слова к части I

Упражнения

Упражнение 1. Найдите сказуемые в следующих предложениях. Определите их время и залог.

1. All control patients were receiving oxygen over a period of two hours.

2. In order to analyse the changes in recumbent B.P. (blood pressure) after the analgetic injections, the patients have been divided in two groups.

3. 8 or 9 patients who were being injected with pentazocine for ten minutes showed a rise of B.P. 4. Other studies have suggested that pentazocine produces less sedation than the narcotics. 5. The patient had signs of severe congestive failure due to aortic insufficiency. 6. When the attendant physician entered the ward, patient P. was being injected aminophylline intravenously.

Упражнение 2. Напишите исходные слова к нижеприведенным производ- ным и переведите их.

inside, specialized, irritation, respiratory, eventually, mucopurulent,

inflammation, bacterial, staining, to discharge

Упражнение 3. Прочтите и переведите данные гнезда слов.

Упражнение 4. Прочтите и переведите следующие предложения и словосочетания.

1. bronchial tree; 2. the smoke irritates my eyes; a muscle contracts when irritated by electricity; 3. to be infected with diphtheria; to spread by infection; infection may be carried through the air

Упражнение 5. Просмотрите текст А. Передайте основное содержание каждой части.

Упражнение 6. Найдите в тексте А ответы на следующие вопросы и зачитайте их.

1. Is the upper or lower part of the respiratory tract affected more often? 2. What happens to the mucous membrane when it is being inflamed? 3. What does the term «catarrh» indicate and what is the condition of catarrhal inflammation characterized with? 4. What causes bronchitis? 5. What are the symptoms of chronic bronchitis?

Text A

Infections of the Respiratory Tract

1. While the slides were being prepared the lecturer announced the theme to be discussed. He said: «The respiratory tract is subject to infection more frequently than any other part of the body. Respiratory infections stand third as a cause of deaths; they lead all other causes between ages of fifteen and thirty-five. The upper portion of the respiratory tract, the nose, throat and trachea, are affected more often than the lower, the bronchi and lungs. The deeper the inflammation, the more serious are its consequences; pneumonia is frequently fatal. Inflammation of the deeper respiratory structures results from a downward extension of a comparatively harmless inflammation in the upper structures.»

2. All the respiratory passages, except the deepest structures of the lungs, are covered with the mucous membrane; when this tissue becomes inflamed it is being swollen and there is a profuse flow of mucus. Pus resulting from bacterial action is mixing with the mucus, making it opaque and white or staining it yellow; the discharge is then said to be mucopurulent. Inflammation of the mucous membrane is of the so-called catarrhal type; the term «catarrh» indicates a chronic state of inflammation.

Chronic Bronchitis

3. The inside of the bronchioles is lined with a highly specialized membrane. This membrane has a layer of mucus to trap the foreign matter that have entered the lungs. Millions of hairlike cilia are constantly sweeping the layer of mucus with its trapped foreign particles upward to the throat where it is being swallowed.

4. Repeated irritation of this ciliated mucous membrane can paralize the action of the cilia, eventually destroy them and stimulate an excessive production of mucus. This is the condition known as chronic bronchitis. Since the cilia can no longer clear the lungs of mucus, it accumulates until the flow of air through the bronchioles is obstructed. This obstruction then evokes coughing that helps to clear the lungs. Frequent coughing is the most important, prominent symptom of chronic bronchitis. Other symptoms may include shortness of breath1 and wheezing.

5. The main treatment of chronic bronchitis consists of eliminating the irritation that causes it. The source of irritation is often smoking tobacco. The so-called «smoker's cough» is in reality a symptom of chronic bronchitis. The first step in treating any lung disorder is to stop smoking.

Coughing itself can contribute to the irritation of the bronchioles. If the source of irritation is an infection the disease will be receiving the treatment of a physician.

Notes

1. shortness of breath одышка

Упражнение 7. Заполните пропуски словами until, since, than, that, above all.

1. The upper portion of the respiratory tract is affected more often ... the lower one. 2. ... the cilia can no longer clear the lungs of mucus it accumulates ... the flow of air through the bronchioles is obstructed.

3. This obstruction then evokes coughing ... helps to clear the lungs.

4. ... chronic bronchitis should receive the treatment of a physician.

Упражнение 8. Определите значения выделенных слов в данных предло- жениях.

1. The cilia can no longer clear (разгружать, освобождать) the lungs. 2. Frequent coughing is the most prominent (заметный, известный, важный) symptom of chronic bronchitis. 3. The first step in treating (лечение, обработка) any lung disorder is to stop smoking.

Упражнение 9. Спишите первый абзац текста А и подчеркните в нем слова, которые могут быть опущены.

Упражнение 10. Прочтите и переведите письменно пятый абзац текста А.

Упражнение 11. Прочтите и переведите следующий текст, найдите глаголысказуемые во временах группы Continuous.

Mrs. Smith had bronchial asthma for four years, before she was admitted to the Maudslay Hospital in February 2002 at the age of 26. Her parents and younger brother were ill. Her paternal grandmother, who died at 70, was asthmatic. Her first attack of asthma awoke her at five o'clock one morning in November when she was 22: «I felt terrible, I thought, I was choking. It

felt as though my throat was shutting up.» She thought she was dying. The attack subsided without treatment after half an hour. Thereafter Mrs. Smith was frightened of the asthma itself and her attacks became more frequent and more severe. Since October 2001 even the earliest symptoms of asthma had frightened her: «I feel a tightening up of my chest; then I am gasping for breath, then the wheezing starts; then I have a choking feeling in the back of my throat. Then I just panic and get worse and worse.» When she was admitted she was in status astmaticus. She was anxious, but not depressed; her intelligence was average; and she was beginning to regard her asthma as a nervous illness. In the hospital Mrs. Smith was treated with prednizolone by mouth, supplemented by hydrocortisone intravenously, isoprenaline inhalations, ephedrine, and phenobarbitone. As her sputum was occasionally purulent, tetra- cycline was added. Throughout March she had only four mild attacks which settled within ten minutes. During these brief episodes she was noticeably free from anxiety. She went home early in April 2002, taking prednizolone 25 mg by mouth. On this outpatient treatment her asthma quickly subsided.

Упражнение 12. Составьте план текста А письменно.

Часть II Слова к части II

Упражнения

Упражнение 1. Прочтите текст В (10 мин.). 1) Разделите его на смысловые части. 2) Найдите и переведите глаголы-сказуемые во временах группы Continuous в действительном и страдательном залоге.

Text B Tobacco and its Effects

Tobacco smoking is probably the most widespread and dangerous drug usage. The cigarette consumption has generally been subject to certain factors. For example, the greatest increases in smoking have occurred during wars.

The main reason for this periodic increase was that the population in general experienced increased tension. Another reason for this increase during wartime was that young soldiers were being introduced to smoking as a tension reliever.

Despite public information campaigns on the subject, too few smokers realize the degree and extent of damage to their bodies associated with cigarette smoking.

Minor ailments directly related to smoking compete with the common cold1 as major causes of the time lost from work and studies.

Recently, studies of large groups of people have shown that cigarette smokers are more likely to die of certain cardiovascular diseases than non-smokers. A cause and effect association has theoretically been established between cigarette smoking and incidence of coronary attacks in humans, especially men between 35 and 55 years of age. The risk of death in male cigarette smokers in relation to non-smokers is greater in middle age than in old age. Smoking is being increasingly linked to the development of respiratory diseases, such as bronchitis and emphysema. Air pollution and respiratory infections as well as smoking cause and aggravate chronic bronchitis and emphysema.

Fig. 15. Alveoli in normal lung tissue and emphysema

Smokers are not only polluting their own air with their cigarettes but are subjecting non-smokers, who make up three quarters of the population, to nearly the same health risk. Subjected to the effects of sidestream smoke, non-smokers may breathe in many of the toxic chemicals of the cigarette from the environment they are in and are, in fact, «passively smoking». «Side-stream smoke» produced from the burning end of the cigarette contains very high concentrations of toxic chemicals which are usually perceived as unpleasant by both smokers and non-smokers.

Allergic reaction to smoke is common. Asthma, chronic bronchitis, emphysema or ischemic heart disease sufferers experience reactions to passive smoking that range from mild nasal congestion and eye irritation to headache, dermatitis and even a few life-threatening asthmatic attacks. People with advanced respiratory and cardiac breath literally fight for life.

Tobacco contains more than hundred known chemical compounds including nicotine. Some of the substances found in tobacco remain in the ashes of a burned cigarette; others are greatly changed during the burning process. Moreover, additional compounds are being produced during

combustion, and it is some of these materials that are of great concern to scientists and physicians. The composition of the cigarette smoke that enters the human body has been the primary aim of most analytical studies.

Nicotine and at least 15 other compounds found in cigarette smoke are known to be cancerogens - cancer-causing substances. When a person inhales cigarette smoke, the smoke is passing down the trachea (windpipe) to the bronchial tubes and into the lungs. Autopsies of hundreds of human lungs have shown that it is precisely in these areas of maximum exposure that precancerous changes are most likely to appear.

Thus there are some relationships between smoking, lung cancer, and many other respiratory conditions. Furthermore, cigarette smoke is itself an irritant. Heavy smokers feel this irritation in their throats and will be developing «smoker's cough» after a few years of smoking.

Notes

1. common cold простуда

Упражнение 2. Найдите в тексте B предложения, более полно выражающие мысль данных суждений, и прочтите их.

1. The cigarette consumption has been subject to certain factors. 2. Few smokers realize the degree of damage to their bodies associated with cigarette smoking. 3. Allergic reaction to smoke is common. 4. Tabacco contains hundred chemical compounds. 5. Cigarette smoke is an irritant.

Упражнение 3. Опишите вид альвеол в норме и при эмфиземе, используя текст и рис. 15.

Часть III

Контрольно-обобщающее упражнение к уроку 17

Укажите, в каких предложениях глагол-сказуемое стоит в форме страдательного залога во временах группы Continuous.

1. Neither antibiotic was being used in the course of treatment. 2. Now everything is done to prevent respiratory diseases. 3. 10 of twenty experimental patients who thought that they were inhaling irritants or allergens developed chronic asthma. 4. We were giving penicillin to the patients with bronchitis from April to May and came to the conclusion that it is not helpful in this case. 5. A new drug is being tested successfully at the Department of clinical pharmacology. 6. The percentage of patients with serum hepatitis has been increasing since the first publication,

(Ответ: 1, 5. Если вы ошиблись, повторите ? 14 Грамматического справочника.)

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.

- You home task learn by heart the new words retell the text

Lesson 26

- **Topic of the lesson**:Jaundice.Peptic Ulser
- **Objectives:** 1. to give instructions can may must
  2. to do practical exercises
  3. to develop their outlook

- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

How much wood a woodchuck chuck
if a woodchuck could chuck wood?
A woodchuck could chuck as much wood
as a woodchuck would chuck
if a woodchuck could chuck wood.

- **Teaching / learning activities**
  - **Instructions**
  - **Practice**

JAUNDICE. PEPTIC ULCER

Повторение: Модальные глаголы can, may, must и их эквиваленты! (? 17)

Часть I

Упражнение 1. Напишите следующие предложения: а) в прошедшем времени; б) в будущем времени. Переведите предложения.

1. You must follow all the new important medical researches in your field. 2. By means of spirometry the dynamic lung volumes may be assessed without difficulty. 3. He must investigate a series of case reports before the lecture. 4. You may take your analyses in the laboratory. 5. Chronic inhalation of cadmium fumes can cause chronic progressive emphysema.

Упражнение 2. Переведите следующие предложения с модальными глаголами: can, could, may, might, must, shall.

1. We could not detect any antibiotic activity in the sputum of our patients. 2. The pre-treatment strains of two patients may be assumed to be sensitive to streptomicin. 3. Thinking about asthma or hearing a description of an attack can even provoke asthma. 4. Every physician must know the pathology of chronic bronchitis and emphysema. 5. Heavy physical activity shall not be resumed within the first three months after an attack of myocardial infarction. 6. Professor explained that dogs inhaling cigarette smoke over long periods might develop lung damage.

Упражнение 3. Дайте исходные слова к нижеприведенным производным. stimulation, population, lining, investigation, accompanying

Упражнение 4. Прочтите и переведите данные гнезда слов.

1. to investigate - investigator, investigation, investigatory; 2. bile - biliary, bile-stained, bile-stone; 3. to complicate - complicated, uncomplicated, complication; 4. serum - sera, serous

Упражнение 5. Прочтите и переведите данные словосочетания.

bile duct, bile colic (calculus), complicated system (problem, mechanism, apparatus), complicated disease

Упражнение 6. Просмотрите текст А и скажите, сколько типов желтухи описано в тексте.

Text A Jaundice

1. Perhaps the most obvious symptom that may result from disease of the liver or biliary passages is jaundice, and the estimation of the level of bilirubin in the serum is to be therefore frequently carried out in the investigation of a case of liver disease.

2. The fact that sera from different cases of jaundice can give different types of reaction has been used as a basis for differentiating between different types of jaundice. Jaundice should be divided into three main types, viz.: obstructive jaundice, hepatocellular or «toxic» jaundice (with or without some degree of accompanying obstruction) and hemolytic jaundice. In uncomplicated obstructive jaundice, liver function is largely or wholly normal, so that the bile pigments are excreted normally into the bile passages; but owing to the presence of some obstruction (either a stone impacted in the common bile duct, or obliteration of the duct by a carcinoma of the head of the pancreas) the bile is unable to enter the duodenum and has instead to be re-absorbed into the circulation. In hepatocellular jaundice the function of the liver cells is changed so that they can not excrete the normal amount of bile pigment reach- ing them in the blood stream. In this case bilirubin level gradually rises. In hemolytic jaundice the excessive amounts of bile pigment (which are formed as a result of the excessive red cell destruction) are incompletely excreted by the liver cells and have been re-absorbed from the obstructive bile passages. In hepatocellular or obstructive jaundice the excess of circulating pigment has not passed through the liver cells.

Упражнение 7. Просмотрите текст А и найдите предложения, в которых описываются симптомы каждого типа желтухи.

Упражнение 8. Найдите в тексте ответы на следующие вопросы и зачи- тайте их.

1. What procedure has to be performed to diagnose a liver disease? 2. How can a doctor differentiate between the types of jaundice? 3. How

many types of jaundice are there? 4. How does the function of the liver change in the cases of hypocellularity jaundice?

Упражнение 9. Прочтите и переведите данные слова.

perhaps, the fact that..., viz. (videlicet), so ... that, whereas

Упражнение 10. Составьте план текста А письменно.

Упражнение 11. Перепишите схему в тетрадь. Дополните ее.

1. 2. 3.

Упражнение 12. Заполните пропуски модальными глаголами can, could; may, might; must; should.

1. If you are ill you ... consult a physician and ... do what he says. 2. Since one pack of 20 cigarettes contains 30 mg of cadmium, it is possible that chronic inhalation of cigarette smoke ... lead to an enhanced cadmium intake. 3. The patient who receives the blood of the diseased donor ... develop a positive test for the hepatitis antigen shortly after transfusion. 4. This patient had received 1 unit of blood at operation and ... have viral hepatitis. 5. The patients with jaundice ... be immediately transferred to an infectious hospital. 6. Sera from apparently healthy blood donors ... be always tested for the presence of hepatitits antigen.

Упражнение 13. Переведите следующие предложения с модальными глаголами и их эквивалентами.

1. Infectious hepatitis with a short incubation period can also be transmitted during blood transfusion. 2. There is experimental evidence that the passive administration of IgG antibody interferes with the synthesis of IgM antibody and in this way is able to alter the immune response. 3. Some researchers suggest that the differences between serum hepatitis and infective hepatitis

might depend on whether a common causative agent is or not bound by antibody. 4. The strong association of the hepatitis antigen with acute viral hepatitis increases the suspicion that donor blood containing the antigen may be infectious. 5. You should take the drug three times a day before meals. 6. We had to examine samples from normal subjects who had been exposed to hepatitis. 7. Convalescent sera from patients with hepatitis may contain trace amounts of antibody and require further study. 8. 10 patients were to be studied with a clinical picture quite compatible with acute hepatitis. 9. We were allowed to follow up sera in 27 of 49 experimental patients with positive reactions for hepatitis.

Часть II

Слова к части II

Упражнения

Упражнение 1. Определите значения указанных слов в данных словосоче- таниях и предложениях.

1. condition - состояние, условие, заболевание; in good, bad con- dition; under favourable conditions; Ulcer is a common condition in any country. The patient is in a critical condition.

2. to recognize - распознавать, признавать; An emotional stress is a commonly recognized factor. The disease is easily recognized.

Упражнение 2. Прочтите текст B (10 мин). 1) Разделите его на смысловые части. 2) Найдите и переведите предложения с модальными глаголами и их заменителями.

Text B Peptic Ulcer

Ulcer is a common condition.

What causes ulcers? A peptic ulcer, as the name says, is an erosion in the lining of the digestive tract as a result of the action of the enzyme pepsin. An increase in the acid content of the gastric juice starts pepsin

digesting the mucosa. Most of the symptoms are ascribed to the high degree of acidity of the juice. Not all persons with hyper-acidity must develop ulcers. The second, commonly recognized factor is emotional stress. Emotional stress produces conditions especially favourable to ulcer formation. Peptic ulcer disease can be called a psychosomatic disease; an actual bodily ailment, produced, or at least aggravated, by the mental and emotional state.

There are two very distinctive varieties of peptic ulcer - gastric and duodenal. Although they are found in two different places-the stomach and the duodenum respectively - they look alike and cause similar distress. Gastric ulcer is caused by the hormone gastrin, secreted during the gastric phase of digestion. Distention of the stomach lining causes gastrin to be secreted from the antrum; gastrin in turn stimulates the gastric glands to work overtime. Gastric ulcers bleed into the stomach and may actually perforate the stomach wall.

Duodenal ulcer, found in the first ten inches of the small intestine, is four times as common as gastric ulcer. This is the «ulcer of stress» mentioned earlier, though the psychic factor is also present in other forms. The patient usually complains of a pain and «heartburn» after meals (within the first hour in case of gastric ulcer, from three to four hours after meal in duodenal ulcer). Besides the pain which the patient is often unable to bear, he may also suffer from frequent vomiting. If the gastric juice shows an abnormal concentration of HCl1, the diagnosis is practically certain.

Since the secretion of gastric juice is excessive in all forms of peptic ulcer, proper diet should be neccessary for the suppression of secretion. This means that the diet, instead of being appetizing, has to be monotonous, in order to suppress the appetite juice. Meat and alcohol are to be forbidden.

Notes

Упражнение 4. Найдите в тексте В предложения, более полно выражающие мысль данных суждений, и прочтите их вслух.

1. Ulcer is a common condition. 2. The first cause of peptic ulcer is an increase in the acid content of the gastric juice. 3. Not all persons with hyperacidity develop ulcers. 4. Gastric ulcer may perforate the stomach wall. 5. Duodenal ulcer is the ulcer of stress. 6. The proper diet should be nesessary for normal secretion.
1HCl hydrochloric-acid - соляная кислота

Упражнение 5. Просмотрите еще раз текст В и выпишите предложения, несущие, на ваш взгляд, наиболее важную информацию.

Упражнение 6. Передайте краткое содержание текста, используя предыдущие упражнения и слова к тексту В.

Часть III

Контрольно-обобщающие упражнения к уроку 18

Упражнение 1. Укажите, в каких предложениях модальные глаголы или их эквиваленты выражают долженствование.

1. As the proportion of low titre sera was so high among hepatitis patients, the percentages of anticomplementary sera had to be calculated. 2. You should use ampicillin intramuscularly for treatment of this infection. 3. Donors with a history of hepatitis are not allowed to give blood. 4. Two of 18 patients were to receive spaced transfusions during their hospitalization. 5. Since the antibodies in commercial γ- globulin have a half-life of about 32 days, high levels of hepatitis «antibody» from the two injections must be present in the majority of patients.

(Ответ: 1, 2, 4, 5. Если вы ошиблись, повторите ? 17 Грамматического справочника.)

Упражнение 2. Найдите в левой колонке перевод слов из правой колонки.

1. to bring about 1. обращаться к кому-л.; применять
2. lesion 2. конкурирующий, конкурсный
3. to apply 3. еда, принятие пищи
4. application 4. быть причиной, вызывать
5. competitive 5. гниение, разложение, гнилость
6. putrefaction 6. рана, поражение
7. a meal 7. применение

(Ответ: 1-4, 2-6, 3-1, 4-7, 5-2, 6-5, 7-3.)

Упражнение 3. Прочтите данные предложения и скажите, соответствуют ли действительности упоминаемые в них факты.

1. Both duodenal and gastric ulcers are caused by hypersecretion of gastric juice. 2. Gastric digestion is brought about by putrefaction. 3. Pure pancreatic juice or bile alone can produce a destruction of mucosa. 4. In the interval between meals minimal secretion of gastric juice occurs in healthy individuals. 5. Physiologic mechanism of regulating gastric secretion has been worked out by experimental studies on higher animals.

- Conclusion
- What was you home task for today?

  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to translate the text and retell it.

The lesson is over good bye!

Lesson 27

- Topic of the lesson: Kidney diseases
- Objectives: 1. to introduce students to new material
  2. to do exercises using infinitive
  3. to develop their outlook

Materials needed: handouts, teaching techniques, markers, blackboard, chalk

- Introduction

KIDNEY DISEASES

Повторение: Функции причастий (?? 20, 21)

Часть I Слова к части I

Упражнения

Упражнение 1. Прочтите и переведите следующий текст. Найдите предложения, где употребляются I и II формы причастий.

Patients with diseases requiring very large numbers of blood transfusions are presumably exposed to hepatitis repeatedly and might be expected to possess antibody against the hepatitis virus(es) or its products. When employing sera from such repeatedly transfused individuals as antisera, Blumberg et al. found an antigen in the serum of an Australian aborigine which has become known as the Australia antigen. On the basis of population studies it was originally

proposed that the Australia antigen was another example of a genetically determined human trait.

Recently, however, the association of the Australia antigen with viral hepatitis has been appreciated, and it now appears that the observations reported on the occurrence of this factor can be explained on an infectious basis. Using similar methods, Prince has reported the finding of an antigen in patients with serum-hepatitis (S.H. antigen), it being absent in patients with infectious hepatitis.

As previously mentioned, it seems likely that the Australia antigen and the S.H. antigen are related, but uncertainty exists as to whether they are immunologically identical or only similar.

We have detected a specific antigen in a high percentage (80%) of patients with both forms of viral hepatitis. Patients studied were from the wards and clinics of the Presbyterian, Francis Delafield, and Har- lem Hospitals of New York City. Clinical diagnoses were established on the basis of history, physical findings, and laboratory values, routine laboratory tests performed in the clinical laboratories of the respective hospitals by standard techniques.

Упражнение 2. Прочтите и переведите данные слова. Запомните их значение.

severe, anorexia, variable, albumin, calculus (pl. calculi) radiopaque, thigh, spontaneously, descent, morphine

Упражнение 3. Прочтите и переведите данные однокоренные слова.

1. ultimate, ultimately; 2. thigh, thigh-bone; 3. sign, to sign, signal, signature, sign-board; 4. to incise, incised, incision, incisive

Упражнение 4. Просмотрите текст А. Передайте основное содержание текста.

Text A Stones in the Kidneys

1. Clinical manifestation. In many instances stones are carried in the kidneys for years producing no symptoms. More commonly, a mild infection develops in the pelvis about the stone and gradually involves the cortex of the kidney until a severe pyelonephritis develops. If the stone is large, or several are present, the infection may progress to a pyelonephrosis, resulting in the destruction and ultimate loss of the kidney. Mild fever, pain, malaise and anorexia are usually present. Pus and a variable amount of albumin are present in the urine. Such symptoms as frequency of urination and mild burning pain usually accompany infection of this type. The diagnosis of renal calculi can be made by an X-ray film since most of these stones contain sufficient calcium to be radiopaque.

2. The most dramatic manifestation of renal calculi is renal colic brought about by the entrance of a stone into the ureter and its passage downward to the bladder. The pain described usually radiates downward toward the thigh. Hematuria is a constant symptom and is an important diagnostic sign.

3. While passing slowly, the stone may develop infection and pus as well as bacteria will be found in the urine. Fever is absent except the

instances when the obstruction is present long enough to allow the development of infections. On rare occasions the stone produces sufficient ulceration in the ureter during its passage. Differentiation of renal colic from other acute abdominal conditions can usually be made by urine examination, and X-ray.

4. Treatment. Unless the renal stone is «silent», treatment should be directed toward its removal. Most stones having entered the ureter will pass spontaneously into the bladder by the prescuption of conservative treatment such as forcing fluid, sedation, etc. During the attack of colic analgetics may be required to control the pain; if after many days, there is no evidence of progression in the descent of the stone, ureteral catheterisation may be used in dislodging it. On rare occasions an operation (usually extra-peritoneal with incision into the ureter) should be performed to remove the stone. Large stones in the kidney cannot be passed by way of the ureter and if symptoms are produced operation is necessary. If the stones are present in both kidneys, it is usually preferable to operate first on the kidney with the poorer function, since the operation may produce a temporary anuria; if the better kidney is the one operated on first, and temporary anuria results, a fatal outcome may follow.

Упражнение 5. Просмотрите текст А еще раз и перечислите основные симптомы и способы лечения мочекаменной болезни.

Упражнение 6. Найдите в тексте А ответы на следующие вопросы и зачитайте их.

1. Do stones in kidneys usually produce pyelonephritis? 2. What symptoms help to diagnose renal calculi? 3. What is renal colic and how does it manifest? 4. When is conservative treatment used in cases of renal calculi? 5. What kidney is operated on first if the stones are present in both of them and why?

Упражнение 7. Напишите возможные сочетания: а) глаголов и существи- тельных; б) прилагательных и существительных.

Упражнение 8. Прочтите и переведите аннотации. Скажите, какая из них передает содержание текста наиболее адекватно и более полно отвечает требованиям, предъявляемым к аннотации.

Stones in the Kidneys Clinical manifestation

Very often an infection about the stone causes pyelonephritis or pyelonephrosis, resulting in the loss of the kidney.

The symptoms are mild fever, pain, malaise, anorexia, pus and albumin in the urine, frequency of urination and mild burning. The diagnosis can be made by X-raying. The pain toward the thigh, hematuria, on rare occasions ulceration in the ureter, fever are signs and symptoms of renal colic. Treatment should be directed toward its removal unless the stone is «silent».

Stones in the Kidneys Clinical manifestation

In many instances for years without symptoms. More commonly a mild infection about the stone develops into pyelonephritis or if the stone is large, into pyelonephrosis. Mild fever, pain, malaise and anorexia, pus and albumin in the urine, frequency of urination and mild burning pain accompany this infection. The diagnosis can be made by an X-ray film. Renal colic is brought about by the entrance of a stone into the ureter while passing downward to the bladder. The pain described radiates toward the thigh. Hematuria is a diagnostic sign.

If the stone is not passed rapidly, infection may develop: pus in the urine, fever, when obstruction is present. Ulceration in the ureter is rare. Urine examination and X-ray help to diagnose renal colic. Treatment. If the stone is «silent», conservative treatment such as forcing fluid, sedation, etc., is prescribed. Analgetics may be required during the attack of colic. Ureteral catheterization, on rare occasions extra-peritoneal operation with incision into the ureter is necessary. If the stones are present in both kid- neys, it is preferable to operate first on the kidney with the poorer function.

Упражнение 9. Раскройте скобки, выбрав нужную форму причастия. Переведите предложения.

1. One week prior to the admission, the patient developed diarrhea (associated, associating) with weakness, fever and general malaise. 2. That report describes an (immuno suppressing, immuno suppressed) patient with mucosal and serosal ulcerations of the stomach, jejunum, ileum and ascending colon. 3. Stones are often carried in the kidneys for years (producing, produced) no

symptoms. 4. The ulcer most commonly (associated, associating) with the gastrointestinal system is the peptic ulcer (occurring, occurred) as a gastric or duodenal ulcer. 5. The result of nephrolithiasis may be obstruction of the kidney, ureter, or bladder leading to (increased, increasing) pressure behind the stone.

Упражнение 10. Замените причастные обороты придаточными предложе- ниями, сделав соответствующие изменения, согласно образцу; используйте союзы или союзные слова as, and, when, which.

Образец: The usual manifestation of renal calculi is renal colic brought about by a stone in the kidney or ureter. The usual manifestation of renal calculi is renal colic which is brought about by a stone in the kidney or ureter.

1. The conditions for stone formation are: a cavity containing a fluid; the fluid having salts in solution. 2. The salts held in solution in the fluid are deposited on the foreign substances. 3. The foreign objects forming stones in the kidneys and bladder are bacteria and the small shreds of mucus. 4. All experimental patients described here had stones in the bladder. 5. When collected in polypropylene bottles the urine was kept in refrigerated lockers.

Упражнение 11. Опишите виды камней при мочекаменной болезни, используя текст и рис. 16.

Часть II Слова к части II

Упражнения

Упражнение 1. Прочтите текст B (10 мин). 1) Скажите, о каких заболева- ниях идет речь в тексте и существует ли какая-либо взаимосвязь между ними. 2) Найдите предложения: а) где употребляются I и II формы причастий; б) определите их функции. 3) Переведите эти предложения.

Text B Kidney Diseases

There are three structures of the kidney which are susceptible to disease: the glomeruli, the tubules and the blood vessels. However, it is rare that only one of these structures is affected; what happens to one frequently affects the others as well.

The disease in which the glomeruli are particularly involved is called glomerulonephritis. It may be acute or chronic, the first frequently leading to the second. It is often a sequel1 to such a childhood infectious disease as scarlet fever. In glomerulo-nephritis, the glomeruli become clogged with exudate and cell debris so that the blood no longer flows through them. Here a

clearance test is useful; it will show that much smaller quantities of filtrate are being formed than normally. The glomeruli being still open become permeable to protein and albuminuria becomes very marked. This leads to edema.

Diseases involving the tubules are called nephroses. They are usually caused by poisons of various kinds, such as mercury, bismuth, uranium, or carbolic acid. Some degree of tubular degeneration occurs, however, in such diseases as diabetes, malaria and pernicious anaemia2, and also in traumatic shock. Finally, athero-sclerosis of the kidney may occur, reducing the total blood flow through the kidney's blood vessels.

What happens to the kidneys when incompatible blood has been used in a transfusion? Hemolysis of red cells occurs, of course, and the liberated hemoglobin circulates in the blood. Passing through the kidney, hemoglobin (although its molecular weight is 68,000) passes through the membrane into the tubules. If the amount is small, reabsorption occurs, but in the amounts increased after an incompatible transfusion the hemoglobin, passing through the tubules, is precipitated. This blocks the tu-

Fig. 16. Urinary casts.

sequel - следствие.

pernicious anaemia [s'nimp] - злокачественная анемия.

bules; they cease to function and finally die. Patients having received the wrong type of blood can often be saved if the blood is thoroughly alkalinized; an alkaline filtrate is formed and thus prevents precipitation.

A common disease of the kidney, known as Bright's disease, includes a number of different conditions. Bright was a physician establishing a connection between degenerative changes in the kidney and the presence of albumin in the urine. The discovery of albumin in the urine usually indicates a faulty working of the kidneys. It means that albumin from the blood plasma is being allowed to pass through the renal tubules, and thus be excreted in the urine. At the same time the damaged tubules fail to eliminate fluid. This fluid collects in the tissues and causes swelling, or edema, of various parts of the body. The fluid is more likely to collect in the legs and in the eyelids. Hence the puffy face and swollen legs of the sufferers from advanced Bright's disease.

It must not be assumed, however, that the presence of a small amount of albumin in the urine is necessarily a sign of Bright's disease. It is often transient and of no great significance.

Notes

Упражнение 2. Найдите в тексте B предложения, более полно выражающие мысль данных суждений, и прочтите их вслух.

1. There are three structures of the kidney which are susceptible to disease. 2. A clearance test is a diagnosing procedure in glomerulonephritis. 3. Nephroses are caused by poisons. 4. The patients who have received the wrong type of blood can be saved. 5. The presence of albumin in the urine is a symptom of a number of conditions known under the heading of Bright's disease.

Упражнение 3. Назовите заболевания почек, описанные в тексте B.

Часть III

Контрольно-обобщающее упражнение к уроку 19

Найдите в следующих предложениях причастия, выполняющие функцию определения.

1. Case 5 had his blood pressure raised over all period of investigation. 2. Transient or reversible albuminuria accompanied by oliguria and highly concentrated urine can be due to functional changes in the glomerular membrane. 3. When damaged the glomerular epithelium becomes permeable to the blood coloids. 4. Oliguria or decreased secretion of urine, may be due to a number of renal factors. 5. Albuminuria is common in passive congestion accompanying cardiac decompensation. 6. Intravenous pyelography having been performed, the patient was operated on.

(Ответ: 1, 2, 4, 5. Если вы ошиблись, повторите ?? 20, 21 Грамматического справочника.)

- Conclusion

- What was you home task for today?

  Who is ready? Come to the blackboard

- Have you any questions? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.

- You home task learn by heart the new words and translate the text

The lesson is over good bye!

Lesson 28

- **Topic of the lesson**: The air and health
- **Objectives:** 1. to introduce students to new words

  2. to do exercises on the text

  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What’s news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Sister Suzie sewing shirts for soldiers

Such skill as sewing shirts

Our shy young sister Suzie shows

Some soldiers send epistles

Say they'd rather sleep in thistles

Than the saucy, soft short shirts for soldiers Sister

Suzie sews.

- **Teaching / learning activities**
  - **Instructions**

Our classroom

Our classroom is not large.

THE AIR AND HEALTH

Повторение: Ing-формы (? 24)

Часть I Слова к части I

Упражнения

Упражнение 1. Переведите следующие предложения с ing-формами.

1. This table presents the patients with post operative infection who were not receiving prophylactic antibiotics. 2. Scattering of radiation occurs when X-rays come into contact with radiopaque objects. 3. Ionizing radiation can cause chemical changes in the cells through which it passes and is able to affect the functioning of those cells. 4. The past history of this patient was complicated by diabetes mellitus, arteriosclerotic heart disease and a long history of smoking. 5. Cases 1-3 were being investigated as to the cause of their radiation dermatitis. 6. Air pollution varies considerably from one area to another, being most pronounced in heavily industrialized zones.

Упражнение 2. Переведите следующие предложения с герундием; опреде- лите его функции.

1. The lecturer told us about the difficulties of making a 24 hour urine collection in healthy children outside hospital. 2. Patients with hepatic cirrhosis develop oliguric renal failure in response to minor decrease in circulating blood volume. 3. The internal distribution of blood flow has been estimated by measuring the extraction of p-aminohippurate. 4. By investigating

patients with cirrhosis a direct relationship between renal hemodynamic changes and cirrhosis of the liver may be established. 5. Developmental disorders of the body lead to stunting or to overgrowth of the skeletal system, to faulty connective or other «soft» tissues or to physical distortion and deformity. 6. I am against your taking part in this experiment.

Упражнение 3. Прочтите и переведите данные гнезда слов.

1. associate, to associate, associable, associated, association; 2. to alter, alteration, alternative; 3. sense, senseless, sensibility, sensitive, to sensitize; 4. to suffer, sufferer, suffering

Упражнение 4. Просмотрите текст А. Передайте основное содержание текста.

Text A Air and Health

1. There is accumulating evidence that air pollution is producing harmful effects in man. Many studies reveal that air pollution may cause reduced visibility, eye irritation, and respiratory irritation. Some medical studies link air pollution with lung cancer, emphysema and other diseases.

2. The severity of symptoms of illness increases proportionately with concentration of pollutants in the air. The first effects of air pollutants are likely to lead to discomfort. Though not associated with the development of disease, even in sensitive groups, these effects are capable of disturbing the comfort of the population in residential or industrial areas. This level is the one at which eye irritation occurs. Also in this category are levels of pollutants that damage vegetation and reduce visibility.

A more serious level of pollutants, or possibly combination of pollutants, is likely to lead to insidious or chronic diseases or to significant alteration of important physiological function in a «sensitive group» such as the aged or sufferers from chronic respiratory or heart disease.

Pollution would not necessarily be a risk for persons in good health. But under conditons of intense pollution, this «sensitive group» may die.

3. Three episodes of acute air pollution have been characterized by sudden death. These tragedies occurred in Belgium's Meuse Valley in 1930, in Donora, Pennsylvania, in 1947, and in London in 1952. In each case a heavy fog settled over the area and did not lift; in each case the phenomenon was produced by a temperature inversion or a layer of warm air over a layer of cold air, and in each case there was a heavy concentration of smoke and pollutants.

4. During these periods, 63 deaths in Meuse Valley, 20 deaths in Donora, and 3,000 deaths in London were attributed to air pollution. Most of those who died were elderly people already suffering from diseases of the respiratory or circulatory systems. This disaster in London was a

major factor in hastening the Clean Air Act of 1956. The emission of dark smoke from industrial chimneys was prohibited for the whole country.

5. Three general types of substances are known to pollute the atmospheres of all industrial environments: chemical, radioactive and biological. Chemical pollutants are the major concern because of expanding industrial, automobile and domestic wastes. However, radioactive pollutants add to the total radiation exposure in both urban and rural air. Biological dusts and pollens likewise may cause effects, especially in persons who react to them with hay fever, asthma, and other allergies.

Упражнение 5. Просмотрите текст А еще раз и назовите факторы, способствующие загрязнению воздуха.

Упражнение 6. Найдите в тексте А ответы на следующие вопросы и зачи- тайте их.

1. What effect is air pollution producing in man? 2. What are the first effects of air pollution? 3. Who were the victims of three episodes in Meuse Valley, Donora and London? 4. What did the Clean Air Act prohibit? 5. What substances are known to pollute the atmospheres of industrual environments?

Упражнение 7. Составьте письменно план текста А.

Упражнение 8. Спишите и переведите абзац 2 текста А.

Упражнение 9. Прочтите приведенные аннотации. Скажите, какая из них передает содержание текста наиболее адекватно и более отвечает требованиям, предъявляемым к аннотации.

Air pollution depending on its concentration and the level of pollutants cause conditions of different severity and even death in the «sensitive group».

Episodes of acute air pollution took place in different countries in 1930, 1947, 1952.

Chemical, radioactive and biological substances are known to pollute the atmosphere.

Air pollution produces harmful effects in man: reduced visibility, eye and respiratory irritation, chronic bronchitis and emphysema.

The severity of symptoms increases proportionately with concentration of pollution.

A serious level of pollutants or combination of them is likely to lead insidious or chronic diseases or to alteration of physiological functions and even death in elderly people or sufferers from chronic respiratory or heart diseases.

The episodes of acute pollution occurred in Belgium, Pennsylvania and London in 1930, 1947 and 1952 correspondingly.

Three types of air pollutants are known. They are chemical, radioactive and biological ones.

Упражнение 10. Прочтите и переведите текст. Определите функции ing- форм.

In October 1948, the small town of Donora, Pennsylvania, was struck by a fog disaster. The town is located on the Monongahela river. On both sides of the river are hills rising about 400 to 600 feet with farmland and woods stretching in all directions.

The area immediately along the river bank is occupied by a large steel mill and a large zink reduction plant. It has long been known as a district liable to heavy fogs especially in the cold weather of the late autumn, and the coal barges on the river used to anchor in midstream waiting for the fog to clear. Sunrise often brought relief but it was common for the captains to await the lifting of the «second fog» which came after sunrise.

The fog of 1948 was unusually wet and dirty and had a peculiar sulphurous smell. It became dense on Tuesday morning, 26 October, and soon Donora's eight doctors were receiving far more calls than they could attend to. The patients complained about pain in the abdomen, splitting headache, nausea and vomiting, and some coughing up of blood. Soon there were 20 deaths directly attributable to the fog. Late Saturday afternoon it began drizzling, the air became clearer, and by Sunday morning, 31 October, the fog was gone.

Часть II Слова к части II

Упражнения

Упражнение 1. Определите значение выделенных слов в данных предло- жениях.

1. Since the amount of contamination until recent years was small in relation to the vastness of the atmosphere, little trouble resulted. «Pure» air is, of course, a mixture of many kinds of gases and varying amounts of water vapour. (степень, количество, общая сумма) 2. Some authorities feel we may eventually run into oxygen depletion problems with the elimination of green plants. (истощение, опустошение) 3. Instead of pollutants being diluted through twelve miles of atmosphere, they may be held within several hundred feet of the ground. (разбавлять, растворять, ослаблять)

Упражнение 2. Просмотрите текст В (10 мин). 1) Назовите основные по- ложения текста. 2) Прочтите вслух интернациональные слова. Запомните их произношение и значение. 3) Найдите в тексте предложения с ing- формами. Переведите предложения.

Text B

Air Pollution

A man can live without food for weeks and without water for days, but he can live without air for only a few minutes. Accordingly, air is the most immediately vital resource.

Since the amount of contamination until recent years was small in relation to the vastness of the atmosphere, little trouble resulted. In the last few decades, however, continuing contamination is producing concentrations that are harmful to men, animals and plants.

Air pollution is produced by different air contaminants in different areas. By general definition, air pollution is the introduction of hazardous materials into the atmosphere as the result of man's activities.

Some pollutants, such as smoke from forest fires, may stem from either natural or human causes. Pollution, as discussed here, will imply the possibility of control.

In order to understand the problem of air pollution more fully, let us briefly examine the nature and size of our atmosphere. «Pure» air is, of course, a mixture of many kinds of gases, including about 78 per cent nitrogen, 21 per cent oxygen, less than 1 per cent argon, 0.03 per cent carbon dioxide, traces of several other gases and varying amounts of water vapour. So far, contrary to popular belief, the percentage of oxygen in the air has not been reduced significantly with the advent of air pollution. However, man's activities are reducing the world supply of green plants which are the only sources of oxygen at an alarming rate. An acre of foodcrop plants produces far less oxygen than the acre of forest it may have replaced. An acre of pavement produces no oxygen at all. Thus, some scientists feel we may eventually run into oxygen depletion problems with the elimination of green plants, though other air problems are more pressing at this time.

The problem of air pollution is further complicated by the existence of inversion layers over many of the world's major cities. An inversion layer is a layer of warmer air over a cooler surface layer of air, and results from an area's topographical character and proximity to water. The inversion layer acts as an air trap, preventing air pollutants from mixing with upper layers of air. Thus, instead of pollutants being diluted through twelve miles of atmosphere, they may be held within several hundred feet of the ground.

The problem of air pollution is of great social importance. Russian research workers have established, after analysing the results of hundreds of medical checkups that there is a definite correlation between the degree of air pollution and rates of incidence and death from bronchitis, pneumonia and lung cancer. The researchers believe that if air pollution were decreased by 50 per cent then the incidence of these diseases would go down by 25 per cent.

An adequate number of facts has now been established which prove that there is a connection between air pollution and the death-rate from all types of cancer.

Упражнение 5. Прочтите нижеприведенные суждения. Найдите в тексте B предложения, более полно выражающие мысль данных суждений, и прочтите их вслух.

1. In the last few decades continuing contamination has become harmful to men, animals and plants. 2. Air pollution is produced in different ways. 3. Man's activities are significantly reducing the percentage of oxygen in the air. 4. The inversion layer acts as an air trap. 5. There is a definite correlation between air pollution and the death-rate from cancer and lung diseases.

Упражнение 6. Основываясь на тексте B, назовите основные источники загрязнения воздуха в современном городе.

Часть III

Контрольно-обобщающие упражнения к уроку 20

Упражнение 1. Прочтите и переведите текст. Проверьте перевод ing-форм по ключу на стр. 209.

The Accident

The pilot of a single-engined monoplane with a passenger was carrying out1 a practice forced landing,2 when the left wing struck a tree.

The aircraft was severely damaged in the crash, the engine mounts breaking3 and the engine section being pushed back4 into the cockpit, trapping5 both occupants by their legs.

On arriving,6 4 minutes after the crash, the rescuers saw that both occupants were hanging7 upside down in their shoulder harnesses. The fuel tank was compressed and had burst at the side and bottom edges.

Most of the 55 litres of 80/87 octane petrol had spurted from the tank externally or into the cockpit.

The occupants' faces were directly beneath the petrol tank and petrol ran over them.

The rescuers released the passenger after about 5 minutes. When he was released he seemed shocked, but did not lose consciousness. Cutting8 equipment was needed to release the pilot, and he was retained in the wreckage for 25 minutes, but during this time remained conscious.

The volume of the cockpit was 945 litres and there was an opening9 in it after the impact, of about 1800 sq. cm.

Both occupants were coughing10 and complained of some soreness of the throat and irritation of the eyes.

The injured were admitted to a hospital 2 hours after the accident.

(Ответ: 1. производил; 2. посадку; 3. сломался; 4. сдвинулся назад; 5. прищемив; 6. по прибытии; 7. висели; 8. режущий; 9. отверстие; 10. кашляли.)

Упражнение 2. Найдите в левой колонке слово или словосочетание, которое поясняет слово в правой колонке.

1. to substitute 1. left as useless
2. feasible 2. to begin
3. to originate 3. to throw down
4. refuse 4. to put in place of another
5. to dump 5. possible, likely

(Ответ: 1-4, 2-5, 3-2, 4-1, 5-3.)

- Conclusion
- What was you home task for today?
- Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- Read and translate the text and learn by heart new words

The lesson is over good bye!

Lesson 29

- **Topic of the lesson**: Water pollution
- **Objectives:** 1. to give instructions and explain the differences of tenses
  2. to do practical exercises
  3. to develop their outlook
- **Materials needed**: handouts, teaching techniques, markers, blackboard, chalk
- **Introduction**

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

I am a mother pheasant pluckier,
I pluck mother pheasants.
I am the best mother pheasant pluckier,
That ever plucked a mother pheasant!

- **Teaching / learning activities**
- **Instructions**
- **Practice**

WATER POLLUTION

Повторение: Функции инфинитива (? 25)

Часть I

Слова к части I

Упражнения

Упражнение 1. Переведите следующие предложения с формой инфинитива в действительном и страдательном залоге.

1. The industries of all countries spend millions to fight air pollution. 2. The patients to be examined suffered from smoke intoxica-

tion. 3. To avoid air pollution from domestic coal fires (as those in London) new heating systems were introduced. 4. The case to be described illustrates the difficulties in the diagnosis of angina pectoris. 5. The desinfection of the skin of the operated area appears to be carried out at once. 6. We know bacteria to be very small single celled bodles.

Упражнение 2. Напишите исходные слова к нижеприведенным производ- ным и переведите их.

bacillary, amoebic, illness, bacteriological, responsibility, foaming

Упражнение 3. Прочтите и переведите следующие словосочетания.

virus disease, to estimate highly, discharges from a wound, to discharge a patient from the hospital, sedimentation rate

Упражнение 4. Просмотрите текст А. Назовите основные проблемы, выз- ванные загрязнением природных вод.

Text A

The Problem of Water Pollution and Pollution Control

1. Water pollution means contamination of surface or ground water1 supplies by sewage industrial wastes or garbage and other refuse. Water pollution arises from the activitites of man in his cities, industries and agricultural pursuits.

2. Water pollution becomes not only an esthetic problem for man, but an economic and medical one as well. Bacterial and viral contamination is a threat for the spread of waterborne diseases such as typhoid, shigellosis or bacillary dysentery, amoebic dysentery, cholera and hepatitis.

3. Water pollution is considered to be perhaps an ever greater hazard to health and economic growth menace to recreation than air pollution. Millions of fish are killed in coastal waters and rivers each year. Radioactive wastes detergents, pesticides, and other chemicals are found in numerous rivers and streams. In addition, demands upon available wa- ter have multiplied because of a larger population, concentrations of people in large urban areas, higher standards of living, growing industry, increased agriculture, and the production of new chemical substances requiring water in the manufacturing process.

4. Pollution control. An over-all reduction of the quantities of contaminants to be discharged to watercourses is necessary. The users of public waters have a responsibility for returning them as clean as possible.

Adoption of better industrial and agricultural practices will be necessary to prevent the more toxic wastes from being discharged into lake, stream, or ocean. For the majority of wastes from cities and industries the solution lies in treatment by physical, chemical, and biological processes which will remove suspended, colloidal and dissolved solids. Sedimentation, coagulation and filtration will remove up to 50% of the organic matter. For more thorough removals it is necessary to use biological processes in which large masses of bacteria and other microorganisms are brought into close contact with the soluble and colloidal organic matter in the waste waters. «Biological filters» are used in most of the biological processes.

5. Prevention of pollution. Waters generally are classified as surface waters and ground waters. Surface waters are lakes, rivers, reservoirs, streams and costal waters.

Treating polluted surface waters is somewhat simpler than eliminating pollution from ground waters, where the pollution can travel rapidly or slowly depending on the nature of the ground strata through which the supply moves and on the nature of the pollution itself.

6. Intensive research is needed to discover better and more efficient techniques for treating water. Scientists in universities and research laboratories are studying a very wide range of renovation techniques. Among them are absorption by carbon or other absorptive filters, distillation, foaming, freezing, ion exchange, solvent extraction, electrodialysis and electrolysis.

Notes

1. surface waters поверхностные воды; ground waters грунтовые воды

Упражнение 5. Просмотрите текст еще раз. Назовите факторы, приводящие к загрязнению природных вод, и способы борьбы с ними в зависимости от типа загрязнения.

Упражнение 6. Найдите в тексте ответы на следующие вопросы и зачи- тайте их.

1. What diseases are caused by bacterial and viral contamination of water? 2. How are waters generaly classified? 3. What factors cause water pollution? 4. What are the processes used to control water pollution? 5. The scientists are studying renovation techniques for treating polluted waters, aren't they? What are they?

Упражнение 7. Напишите возможные сочетания: а) прилагательных и существительных; б) глаголов и существительных.

Упражнение 8. Переведите письменно абзац 4.

Упражнение 9. Заполните таблицу, указав виды загрязнения воды в соответствующих водоемах и способы их очистки.

Polluted Waters

Упражнение 10. Составьте письменно аннотацию текста А.

Упражнение 11. Прочтите и переведите следующий текст; определите функции инфинитива.

The paper reports diarrhea in infants who drink water from local wells. These waters contained sulphate in a concentration of 600-1000 mg. per litre. The water was boiled before use, no microorganisms were found, and diarrhea could be induced or cured simply by manipulation of the sulphate concentration in the water. On the Canadian prairie many wells yield water which contains such a high concentration of minerals that it is too bitter to drink; water from other wells is palatable, yet many cause diarrhea. Sodium, magnesium and calcium were the

most abundant cations to be present in these waters. Sodium always exceeded magnesium. The high sulphate concentration was sufficient by itself to account for the diarrhea. Sulphate is known to be absorbed and its purgative action can be explained entirely by its osmotic effect.

The absorbability of the cation given with sulphate probably does not affect the purgative potency of the salt because sulphate retains an equivalent amount of cation during its passage through the gut. The purgative action of magnesium, another ion, which is poorly absorbed, could be similarly explained. Yet, magnesium is an ion of many parts and the possibility of a direct effect of a high concentration of magnesium on the motility of intestinal muscle cannot be discounted. Other, less scientific, observations have suggested that sulphate has the advantage over magnesium as a purgative.

Much remains to be learned about the transport and effects of these and other ions in the colon.

Часть II Слова к части II

Упражнения

Упражнение 1. Запомните значение и употребление данных слов.

1. to interfere: to interfere in вмешиваться; to interfere with пре- пятствовать, мешать чему-л.

2. matter вещество; вопрос, дело, предмет (обсуждения); as a matter of fact фактически, на самом деле; Animal and vegetable matters are among industrial wastes. Наряду с другими веществами, вещества животного происхождения, а также вещества растительные составляют промышленные отходы. Animal matters are the soonest destroyed by the operation of heat, light and air, vegetable substances yield more slowly. Вещества животного происхождения быстрее разлагаются под действием тепла, света и воздуха; растительные вещества - медленнее.

Упражнение 2. Прочтите текст В (10 мин). 1) Назовите основные типы загрязнения вод. Объясните, как определяется степень загрязнения.

2) Найдите в тексте предложения, где употреблены формы инфинитива.

3) Переведите предложения.

Text B Water Pollution

Water in its natural state is never 100 percent pure. As soon as it condenses as rain, water begins gathering impurities until purified or until it evaporates. Much of this impurity is not sufficient to spoil the usefulness of water; some materials and substances, however, do limit its usefulness.

By definition «water pollution* we mean the presence in water of any substance that interferes with any of its legitimate uses - for public water supplies, recreation, agriculture, industry, the preservation of fish and esthetic purposes.

The principal forms of water pollution are domestic, industrial and agricultural wastes. Domestic wastes include sewage, detergents and everything else going down the drains of a city into its sewer system - used water from toilets, bathtubs, sinks and washings from restaurants, laundries, hospitals and hotels and other businesses.

Industrial wastes are the acids, oils, greases, other chemicals and animal and vegetable matter discharged by factories. These wastes are discharged either through sewer system or through separate outlets directly into waterways. Agricultural wastes include pesticides (insecticides, fungicides and herbicides), fertilizers (mainly nitrates and phosphates) and animal wastes. In addition to these principal forms, other pollutants such as heat and radioactive substances, can contribute to water pollution.

The extent of pollution in a given body of water can be measured to some degree by the amount of organic wastes it contains. Organic wastes can generally be destroyed by biochemical action, either naturally in a free-flowing stream or artificially in a waste treatment plant. Not all pollutants can be removed by such action, however; examples include minerals and acids from industrial operations or mining. Such pollutants as radioactive substances, pesticides, detergents and various oil products are highly resistant to breakdown and must be specially treated.

Упражнение 3. Прочтите нижеприведенные суждения. Найдите в тексте предложения, более полно выражающие мысль данных суждений, и прочтите их вслух.

1. Natural water is never 100 per cent pure. 2. «Water pollution» means the presence in water of the substance that interferes with its legitimate uses. 3. Agricultural wastes include pesticides, fertilizers, etc. 4. There are some forms of water pollution. 5. The extent of water pollution can be measured by the amount of organic wastes in it. 6. Some wastes can be destroyed but others cannot.

Часть III

Контрольно-обобщающее упражнение к уроку 21

Укажите, в каких предложениях употреблены сложные инфинитивные конструкции. Переведите предложения.

1. Such impurities are thought to be allergenic. 2. We know sewage to be the water carried discharges of the human body together with the liquid wastes from household and factory. 3. Have you taken anything to relieve your headache? 4. Water appears to be the largest constituent

of the body making up two-thirds of the total mass of the human organism. 5. Experiments with magnetic resonance seem to support the belief that intracellular water is closer to crystalline than the liquid state. 6. Anomalous expansion of water at temperatures near freezing point enables fresh water fish to survive cold winters.

(Ответ: 1, 2, 4, 5. Если вы ошиблись, повторите ?? 26, 27 Грамматического справочника.)

NOISE POLLUTION

Повторение: Виды придаточных предложений (? 29)

Упражнение 1. Прочтите и переведите следующие придаточные предложения.

1. We know the greatest hazard to man is found in the water contaminated with the discharges from the human body. 2. The principal measures which we use in water purification are: aeration, coagulation, sedimentation, filtration, softening, desinfection (chlorination), absorption (activated carbon), corrosion correction. 3. Civilization requires that the wastes of the human body should be removed from habitation safely and promptly. 4. Were the water not desinfected with chlorine, the pathogenic and other forms of bacteria would not be destroyed. 5. If we used the preventive measures against water contamination in time, we could save many people from poisoning. 6. Had they not purified the drinking water in this area, the disease would have been immediately transmitted.

Упражнение 2. Напишите исходные слова к нижеприведенным производ- ным; переведите их.

noiseless, excessive, equality, deafness, assessment

Упражнение 3. Просмотрите текст А. Передайте основное содержание текста.

- Conclusion
- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give “excellent” mark to … and “good” mark to.
- You home work retell the text learn by heart new words. The lesson is over good bye!

Lesson 30

- Topic of the lesson: Noise pollution
- Objectives: 1. to introduce students to new material
  2. to do exercises using The Simple Present Tense

3. to develop their outlook

- Materials needed: handouts, teaching techniques, markers, blackboard, chalk
- Introduction

Good afternoon dear students! How are today? What is the weather like today? What is the date today? What is the day of the week? What's news? Ok, lets begin our lesson than.

I have a tongue twister for you. Read and repeat after me. You must learn it by heart.

Mrs. Hunt had a country cut front
In the front of her country cut petticoat.

- Teaching / learning activities
- Instructions

Noise as a Source of Environmental Annoyance

1. In recent years more attention has been given to noise and unwanted sound as another form of environmental disturbance. Excessive noise has been a part of the industrial environment for a long time - motors, metal presses, drills and heavy machinery of all types have made many factories a din of noise since the beginning of the industrial revolution. Now, however, the public at large is subjected to increasing noise from traffic, airplanes, construction, urban crowding and we are now aware of much of this sound as a new irritant and source of environmental annoyance. Sound energy is usually measured in terms of decibels, one decibel being approximately equal to the threshold of hearing in man. A 10-fold increase in sound adds 10 units to the decibel scale and a 100-fold increase in sound adds 20 units. In a typical urban environment, background noise in a quiet sound-protected room generally runs 40 decibels while ordinary street noises average 70 to 80 decibels.

2. Around the home, background noise averages 40 to 50 decibels, conversation produces 60 decibels, a garbage disposal 85 and a vacuum cleaner 90 decibels. Heavy city traffic at rush hour usually produces 95 to 100 decibels, and a jet aircraft taking off generates 120 to 150 decibels.

3. Medical science has recently shown that excessive noise can be a significant nervous stress. It can increase irritability and reduce job efficiency. In some cases it can cause changes in heart rate, blood pressure, and metabolism similar to other types of emotional anxiety and stress. Prolonged noise, above the level of 95 decibels, can also cause hearing loss and early deafness. Workers in noisy factories, construction trades and transportation jobs which have high noise levels are especially subject to hearing loss.

4. A special and controversial aspect of noise pollution is the advent supersonic aircraft. They will produce «sonic booms», loud and forceful reverberations of air as the planes pass overhead. Critics of supersonic planes feel that this will be an intolerable source of sound - a new stress that will cost more in human irritation than it will be worth in reduced transportation times. The proponents of supersonic transportation feel that this is nonsense - that man will adjust to this new technologic advance as readily as he adjusted to the light bulb and motor car. Such a controversy provides another example of the difficulty of assessing the full impact of rapidly advancing technology on the health of man and the quality of our environment.

Упражнение 4. Просмотрите текст А и скажите, в чем трудность предотвращения шума.

Упражнение 5. Найдите в тексте А ответы на следующие вопросы.

1. Why has noise and unwanted sound been given more attention to?
2. What are the examples of sound disturbances measured in decibels?
3. What are the consequences of excessive noise as environmental disturbance? 4. What do critics of supersonic planes say? 5. Can man adjust to this new technologic advance?

Упражнение 6. Переведите письменно абзац 4 текста А

Упражнение 7. Составьте письменно аннотацию текста А.

Упражнение 8. Прочтите следующие тексты. Найдите в них придаточные предложения и переведите их.

1. Pollution-Free Electric Car

A Japanese automobile firm has announced successful development of three-wheel electric light van for pick-up and delivery service and informed that it had started production of the car for full-scale marketing.

Recently, development work on electric cars has been accelerated in Japan as a principal means of eliminating environmental damage which is caused by automobiles through air pollution and noise. The electric cars they are going to construct will be the first to be used in the streets. This car will be employed mainly for delivery of newspapers, mail and milk as it has motor and four 12-volt improved lead batteries as the power source. The vehicle, in which only a driver sits, has maximum speed of 40 kilometers per hour. If the batteries are to be charged home electricity can be used. With each charging, that takes eight hours, the electric van can run 40 kilometres. The price is about twice of conventional gasoline cars of a similar type.

2. Quieting Noisy Trucks

The acoustic properties of plastics have played a major role in helping industry to cope with standards on noise emission. And now the experience which was gained over the years is being applied to the job of quieting noisy trucks. We speak of trucks particularly because the diesel engines that carry much of the nation's freight have been identified as a source of widespread noise pollution. No truck which is noisier than an automobile should not be permitted on the road. So it's hardly suprising that interest in plastics is on the rise. Plastics are used as sound absorbing barrier and damping materials.
The sound absorbing foam products that are installed on the top sides, and various other interior areas of the truck cabin will not transmit sounds.

Часть II Слова к части II
Упражнения
Упражнение 1. Подберите соответствующее значение к выделенным словам и переведите данные предложения.
1. There are disadvantages (неблагоприятное положение, недостаток, вред) in intense urbanization. 2. The most damaging effect of noise is the disruption (крушение, раскол, руины, разрыв) of our psychic balance. 3. In our concern with other forms of environmental decay (гниение, разрушение, расстройство) we have overlooked the importance of noise control. 4. Loud, harsh and persistent noise impairs (ослабевать, ухудшать, портить) the functioning of our minds (ум, память, настроение, мнение). 5. Noise must be regarded (касаться, разглядывать, считать) far more than just an annoyance.

Упражнение 2. Прочтите текст B (10 мин). 1) Скажите, что является причиной шумового загрязнения и каковы его последствия. 2) Найдите и переведите придаточные предложения в тексте.

Text B
Noise Pollution
From almost every health-related standpoint, we can say that there are disadvantages in intense urbanization. Environmental problems include air pollution, sewage disposal, acquisition of safe waters, noise abatement, space for outdoor recreation, emotional stress and a host of other problems.

One of the more recently «discovered» pollutants in the modern environment is noise. For the city dweller noise may be the most significant environmental pollutant. He is constantly buffeted by the noise of aircraft, trains, motorcycles, buses, machinery when he is at home and at work, his neighbour's stereo, and his neighbour's toilet flushing. One study showed that the average noise level in residential areas rose as much as 9 decibels between 1984 and 1987.

Some of the effects of noise have been known or suspected for years. Fatigue, emotional stress, and permanent loss of hearing acuity are welldocumented effects. Other studies have shown that noise, either prolonged or sudden, produces involuntary responses by the circulatory, digestive and nervous systems. Noise can cause adrenalin to be shot into the blood as during stress and anxiety periods; it can cause the heart to beat rapidly, the blood vessels to constrict, the pupils to dilate, and the stomach, esophagus, and intestines to be seized by spasm. A three-year study of university students showed that noise of only 7 decibels consistently caused constriction of the coronary arteries which supply oxygen to the heart muscle. Permanent hearing loss occurs with prolonged exposure to sounds of over 90 decibels.

Probably the most damaging effect of noise on the quality of human life is its disruption of our psychic balance. Loud, harsh, or persistent noise puts our nerves «on edge» so that our personal relationships are strained and often explosive, interferes with our concentration, and impairs the efficient functioning of our minds. Noise must not be regarded as no more than just an annoyance because it is a serious threat to the quality of our lives.

In our concern with other forms of environmental decay, we have largely overlooked the importance of noise control, and noise levels continued to creep upward.1 Like any other form of pollution control, noise control will require legislated limits on noise levels, strict enforcement of those limits, and a personal concern2 for the rights of others to live in a decent environment.

Notes

1. to creep upward ползти вверх

2. personal concern личная заинтересованность

Упражнение 4. Прочтите нижеприведенные суждения. Найдите в тексте В предложения, более полно выражающие мысль данных суждений, и прочтите их.

1. For the city dweller noise may be an environmental pollutant. 2. The average noise level in residential areas has risen. 3. The effect of noise is the disruption of our psychic balance. 4. Noise levels continue to creep upward. 5. Like any other form of pollution noise should be controlled.

Упражнение 5. Классифицируйте поражения в зависимости от качества шума по заданной схеме.

Часть III

Контрольно-обобщающие упражнения к уроку 22

Упражнение 1. Найдите и переведите придаточные предложения, в которых отсутствует союз.

1. Any modern vehicle should be propelled by electric motors which reduce pollution and noise. 2. The price we have to pay for the unlimited exploration of natural resources and the pollution of the air and water is rather high. 3. Gears that are made of plastics provide greater freedom from noise and vibrations than metal gears. 4. Had we used the recently developed device we could have saved much time. 5. We know water is a vehicle for such infections as cholera, typhoid fever, dysentery and other diseases having their primary seat in the digestive tract.

(Ответ: 2, 4, 5. Если вы ошиблись, повторите ? 32 Грамматического справочника.)

Упражнение 2. Прочтите текст. Найдите в тексте предложения: а) придаточные дополнительные; б) определительные; в) обстоятельственные; г) условные. Переведите текст.

Nutrients

Nutrients nourish our body and give us energy. Energy is the ability to do work. Our body uses energy for every action to move, to breathe, to think, to grow. Repairing body parts when we get hurt takes energy too. All this energy comes from nutrients in the food.

You know that all foods contain moisture. The solid part of food is made up mostly of carbohydrates, fats and proteins. Carbohydrates and fats supply our body with fuel for energy. If the carbohydrates and fats are not used for energy, they are stored in our body as fat. Proteins provide our body with material for growth and repair. Protein foods also contain some carbohydrates or fats. Meat always has fat with the protein, even if the meat is lean; milk has both carbohydrates and fat with the protein. Vitamins and minerals are other important nutrients which help our body to function properly.

The research workers proved that a balanced diet contains all the nutrients necessary to keep us healthy. No one food supplies all the nutrients that our body needs. Because some foods are high in certain nutrients and other foods are high in other nutrients, it is important for us to eat a variety of foods.

Over half of the food we eat should be in the form of carbohydrates. Most of the carbohydrate foods should be complex ones. Sweet foods such as sugar jam, syrup, frosting, cake and candy are not a good source of carbohydrates. Our body needs vitamins and minerals to change sugar into energy. But refined sugar has no vitamins or minerals in it. The best sources of carbohydrates contain natural sugar or starch as well as vitamins and minerals. When we are not very active we should get most of the carbohydrates that we need from fruits and vegetables because they are low in fat.

- Conclusion

- What was you home task for today?
  Who is ready? Come to the blackboard
- Have you any questions? Some students were active and some were passive. So I give "excellent" mark to … and "good" mark to.
- You home task is to learn by heart the new words and translate the text

The lesson is over good bye!

11. ГЛОССАРИЙ

Hem-, hema-, hemo-, and hemat- are combining forms of the Greek root meaning *blood*.

hem + angio + oma = *hemangioma*

Defifinition: a benign (non life threatening; harmless) tumor of a dilated blood vessel. (*Angio-* is a combining form of a root meaning *vessel.* The suffix *-oma* means *tumor.*) *noun*

Example: Babies can be born with a strawberry *hemangioma,* which is a temporary birthmark on the skin that disappears after 2 to 3 months.

hema + chrosis = *hemachrosis*

Defifinition: an abnormal redness of the blood. (*Chrosis* means *color* or *coloring.*) *noun*

Example: *Hemachrosis* is sometimes seen in patients who are suffering from carbon monoxide poisoning.

hemat + ocrit = *hematocrit*

Defifinition: the percentage of blood that consists of red blood cells. *noun*

Example: A decreased *hematocrit* test result can occur during pregnancy as a result of increased fluid in the bloodstream.

hemat + o + cyt + o + penia = *hematocytopenia*

Defifinition: a condition in which the patient has too few blood cells. (The root *cyt* means *cell,* and the suffix *-penia* means *too few or an abnormal decrease in amount.*) *noun*.

Example: *Hematocytopenia* is a symptom that is found in patients with leukemia, anemia, and lupus.

hemat + o + cyt + ur + ia = *hematocyturia*

Defifinition: a condition in which red blood cells are found in the urine. (The root *ur* means *urine.*

The suffix *-ia* means *a condition or abnormal state.*) *noun* (NOTE: An alternate term for this condition is *hematuria.*)

Example: *Hematocyturia* can be the result of a serious genitourinary, lower abdominal, or pelvic injury.

hemo + dia + lysis = *hemodialysis*

Defifinition: a process of clearing urea, nitrogen, and other toxic wastes from the bloodstream when the kidneys are unable to do so. (*Dia-* means *through.* The suffix *-lysis* means *the process of dissolving, breaking down, or breaking up.*) *noun*

hemo + globin = *hemoglobin*

Defifinition: pigments in the blood that contain iron, which gives blood its red color. Hemoglobin

is commonly referred to as the *red blood cells* or *RBCs.*

Example: Because the patient's blood was low in *hemoglobin,* it was not as red as it should have been.

hemo + rrhage = *hemorrhage*

Defifinition: loss of blood, usually in excess. (*Rrhage* stems from the Latin word *rhegny,* meaning

to burst forth or flflow.) *noun* or *verb*

Example: When an artery is cut, *hemorrhage* is to be expected; without treatment, the patient can exsanguinate (bleed to death).

hemo + philia = *hemophilia*

Defifinition: a hereditary bleeding disorder in which there are insufficient amounts of the proteins

that are needed for the clotting of the blood. (The suffix *-philia* means *a tendency toward.*) *noun*

Example: Children with *hemophilia* cannot risk a bump or bruise for fear of internal hemorrhage.

hemo + stat = *hemostat*

Defifinition: a piece of equipment that is used to stop the flow of blood by compressing a blood vessel. (The root *stat* means *to stand still.*) *noun*

Example: The doctor used a stainless steel *hemostat* to clamp the blood vessel that was bleeding profusely into the wound.

incontinent: involuntarily emptying the bladder

vitals: vital signs: temperature, pulse, respirations, and blood pressure (TPR and BP)

deep laceration: a cut or incision that goes beyond the skin and into the musculature or organs

tourniquet: a device or tool such as a long strip of elastic or cloth that is used to staunch or stop bleeding

BP: blood pressure

thready: describes a pulse that is fine or barely perceptible

tachycardic: referring to a faster-than-usual pulse rate or heart rate, which is measured in beats per minute; a normal pulse rate for a person who has been sitting for a period of time (i.e., riding in an ambulance) should be between 88 and 100 beats per minute (bpm)

resps: respirations (breaths) per minute

localized: appearing in only one specific area or location

to left thumb: the word *to* is frequently used in medicine in place of the word *of*

fracture: a break or a broken bone *out × 3 or 4 minutes:* unconscious for 3 or 4 minutes; just as it is in math, the symbol × is used as an abbreviated way of saying "times"; in this context, "times" refers to duration or how long the patient was out

oriented × 3: the three spheres of orientation are normal: the patient is aware of person, place, and time and she is not confused; in this example, Glory Loeppky has been evaluated and is aware of who she is, she knows that she is in the company of ambulance and hospital staff, and we are left to understand that she also knows the approximate time of day or the day of the week.

a feeling of pressure: **baresthesia**, meaning *a sense of weight or pressure.* In this case, the sensation would be caused by highly sensitive and traumatized tissue, bone, and muscle in Clay's face that have become inflamed. Recall that the body's first reaction to trauma is inflammation at the site (see Chapter 5 and 16 for more information about the inflammatory response). The term *baresthesia* is derived from the roots *bar/o,* meaning *weight,* and *esthesia,* meaning *sensation.*

"...flexing the *semispinalis capitis* and other muscles..."

semispinalis capitis: a longitudinal and deep skeletal muscle that is located in the posterior portion of the neck and that originates in the cervical spine and the thoracic spine (see Figure 13-3). It sits just under the trap

residual: remaining, lingering, or left over. (See Chapter 11 for more information about scars.)

"...confirming that her *presence* would be for the child's safety..."

presence: attendance. In this context, the term refers to the fact the nurse will remain close to the patient (i.e., within arm's reach or closer) should he faint, stumble, or suddenly face any difficulties standing or walking on his own.

lowered Clay's bed: Hospital beds can be lowered or elevated by mechanical means. Whenever a patient is getting up and out of bed, the bed should be lowered so that the patient's feet can safely touch the floor before he or she attempts to stand up. This is a safety precaution to prevent slips and falls.

"...through slightly *pursed lips."*

pursed lips: puckered lips. Clay may be pursing his lips to avoid stretching his sore lips and the tender tissues around his jaw. It may be a self-protective behavior that he may not even be aware that he is performing.

"...the nurse *cautioned him to stand still for a moment."*

cautioned him to stand still for a moment: This phrase describes a standard procedure for ambulating a patient who has been in bed or sitting for a long period. The goal is to ensure that the patient is steady on his or her feet and not weak, dizzy, or experiencing postural hypotension before walking or being left to stand alone (see "Focus Point: Postural Hypotension").

observe for symmetry: As part of the physical assessment protocol, the thorax is examined visually from a number of angles to evaluate its evenness and proportion. For example, if a barrel chest is observed, this may be a result of chronic hyperinflation of the lungs and a sign of emphysema. In addition, if the sternum does not appear to be midline to the chest, if it does not seem to be straight, if it is retracted (sunken inward), or if it is protruding somehow, then the physician will be able to see this and subsequently hear that the patient's breathing is impaired as a result.

"... *measure for diameter* ..."

measure for diameter: This measure will be taken when the chest muscles are at rest and when the patient is expanding the chest by breathing in. Unequal chest expansion can be the result of chronic obstructive pulmonary disease, chest trauma, or other conditions.

"... then *auscultate*—or listen to—the thorax ..."

auscultate: To listen to with a stethoscope. In this context, auscultation of the thorax allows the physician to assess for the symmetry of airflow bilaterally in the lungs. It also lets Dr. Sweetgrass hear whether Zane has normal or abnormal breath sounds. (It is likely that he will have some abnormal breath sounds because he seems to have a persistent cough.)

"I'll be *terminal*."

terminal: Incurable; dying.

Right Word or Wrong Word: *Metastasis, Metastases,* or *Metastasize?*

Say these words aloud. Do they sound exactly the same? If not, would you be able to distinguish which one was being said? Would it be important for you to do so? Explain.

The Lymphatic System

The lymphatic system is frequently studied as part of the circulatory system or as part of the immune system. It is more akin to the latter. The lymphatic system and the immune system are very closely related: they both protect the body from invasion or infection. The lymphatic system is actually an integral part of the *immune system,* which will be introduced and explored in more detail in Chapters 16 and 17.

The primary function of the lymphatic system is maintaining the fluid and protein balance of the body. The system transports fluids called *lymph* (an interstitial fluid) and *chyle* (a fluid product of the intestines). Lymph carries some red bloods cells back into the circulatory system. It accomplishes these functions through its own network of lymphatic vessels (see Figure 14-9). Larger lymph vessels resemble veins, and lymphatic capillaries are scattered throughout the body just as blood capillaries are. Lymph capillaries connect to small lymph vessels, which connect to larger ones, which eventually flow into the thoracic and right lymphatic ducts. These branching lymphatic vessels that are present throughout the body are referred to as ***lymphatic channels*.**

The **lymphatic system** also plays a central role in providing immunity by attempting to halt the spread of infection or invasion by disease. In addition, it facilitates the absorption of fats from foods in the gastrointestinal tract.

Anatomy and physiology

Sometimes referred to as the *lymphatic drainage system* or the *lymph system,* the lymphatic system

consists of lymph, lymphatic vessels, lymph organs, lymph nodes, and lymph ducts.

***Lymph* -** During the process of blood circulation, fluid seeps into the body's tissues through the walls of capillaries. The fluid contains oxygen and nutrients that nourish body tissue. Although some of this fluid may return back through the capillary walls and into the bloodstream, some of it is diffused into the lymphatic vessels. This fluid becomes **lymph**, which is a clear fluid that is able to transport and remove any perceived harmful or unwanted matter within it. Examples of these include cancer cells, bacteria, and dead or damaged cells. The movement of materials through this system is accomplished by the contraction of skeletal muscles, which causes lymph to move through lymphvalves and vessels.

Lymphocytes are lymph cells, and they are produced in bone marrow. They are a type of leukocyte (white blood cell). They include B-lymphocytes (B-cells) and T-stem cells. Lymphocytes are formed
by the process of mitosis in the bone marrow itself. Their function is to respond to antigens by producing antibodies (B-cells) and lymphokines (T- and B-cells) to fight them (see “Focus Point: A Review of Antibodies and Antigens”).

12. Приложение