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ОЦЕНОЧНЫХ СРЕДСТВ
ПО УЧЕБНОЙ ДИСЦИПЛИНЕ**

СГ.02 Иностранный язык в профессиональной деятельности

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1. Паспорт фонда оценочных средств по дисциплине «Иностранный язык в профессиональной деятельности»

Цель фонда оценочных средств. Фонд оценочных средств (далее - ФОС) предназначен для контроля и оценки образовательных достижений обучающихся, осваивающих программу учебной дисциплины СГ.02 Иностранный язык в профессиональной деятельности.

Перечень видов оценочных средств соответствует рабочей программе дисциплины.

ФОС включает контрольно-оценочные средства для проведения текущего контроля в форме устных ответов на вопросы, тестовых заданий, контрольных работ и промежуточной аттестации в форме других форм контроля – контрольное тестирование.

Предметом оценки являются умения и знания.

Контроль и оценка осуществляются с использованием следующих форм и методов:

- для текущего контроля – устный опрос, тестовые задания;
- для промежуточной аттестации – 8 семестр – дифференцированный зачет.

В результате освоения учебной дисциплины обучающийся должен **уметь:**

- строить простые высказывания о себе и о своей профессиональной деятельности;
- взаимодействовать в коллективе, принимать участие в диалогах на общие и профессиональные темы;
- применять различные формы и виды устной и письменной коммуникации на иностранном языке при межличностном и межкультурном взаимодействии;
- понимать общий смысл четко
- произнесенных высказываний на общие и базовые профессиональные
- темы;
- понимать тексты на базовые профессиональные темы;
- составлять простые связные сообщения на общие или интересующие
- профессиональные темы;
- общаться (устно и письменно) на иностранном языке на
- профессиональные и повседневные темы;
- переводить иностранные тексты профессиональной направленности (со
- словарем);
- самостоятельно совершенствовать устную и письменную речь,
- пополнять словарный запас.

В результате освоения учебной дисциплины обучающийся должен **знать:**

- лексический и грамматический минимум, относящийся к описанию предметов, средств и процессов профессиональной деятельности;
- лексический и грамматический минимум, необходимый для чтения и перевода текстов профессиональной направленности (со словарем);
- общеупотребительные глаголы (общая и профессиональная лексика); правила чтения текстов профессиональной направленности;
- правила построения простых и сложных предложений на
- профессиональные темы;
- правила речевого этикета и социокультурные нормы общения на
- иностранном языке;
- формы и виды устной и письменной коммуникации на иностранном
- языке при межличностном и межкультурном взаимодействии.

В ходе изучения дисциплины ставится задача формирования следующих общих и профессиональных компетенций:

ОК 02 Использовать современные средства поиска, анализа и интерпретации

информации, и информационные технологии для выполнения задач профессиональной деятельности.

ОК 04 Эффективно взаимодействовать и работать в коллективе и команде.

ОК 05 Осуществлять устную и письменную коммуникацию на государственном языке Российской Федерации с учетом особенностей социального и культурного контекста.

ОК 09 Пользоваться профессиональной документацией на государственном и иностранном языках.

ПК 1.1 Осуществлять техническое обслуживание технологического оборудования для производства продуктов питания из растительного сырья в соответствии с эксплуатационной документацией.

№ п/п	Контролируемые разделы (темы) дисциплины	Код контролируемой компетенции (или ее части)	Наименование оценочного средства
1	Тема 1.1. Автоматизация производства и технический прогресс	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
2	Тема 1.1. Страна изучаемого языка, ее культура и обычаи	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
3	Тема 1.2. Роль образования в современном мире	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
4	Тема 1.3. Значение иностранного языка в освоении профессии	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
5	Тема 1.4. Основы делового общения	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
6	Тема 1.5. Рынок труда, трудоустройство и карьера	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
7	Тема 2.1. Достижения и инновации в науке и технике и их изобретатели. Отраслевые выставки	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
8	Тема 3.1. Чемпионаты World Skills International: от прошлого к настоящему	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
9	Тема 4.1. Чертежи и техническая документация	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
10	Тема 4.2. Инструменты, оборудование и станки	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
11	Тема 4.3. Техника безопасности и охрана труда	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие
12	Тема 4.4. Решение стандартных и	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие

	нестандартных профессиональных ситуаций		
13	Тема 4.5. Саморазвитие в профессии	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	Устный опрос практическое занятие

Результаты освоения учебной дисциплины

В результате аттестации по учебной дисциплине осуществляется комплексная проверка следующих знаний, умений

Результаты обучения (освоенные умения, усвоенные знания)	Коды формируемых компетенций	Показатели оценки результата
<p>В результате освоения учебной дисциплины обучающийся должен уметь:</p> <ul style="list-style-type: none"> - использовать в производственной деятельности средства механизации и автоматизации технологических процессов. - проектировать, производить настройку и сборку систем автоматизации, выбирать параметры режима работы оборудования, подлежащего регулированию. - проводить настройку приборов автоматики на заданный режим. - владеть навыком их обслуживания, осуществлять контроль измерительных приборов при монтаже, технологическом обслуживании и ремонте оборудования. - обеспечивать сопровождение производства продуктов питания из молочного и мясного сырья на автоматизированных технологических линиях в соответствии с технологическими инструкциями. 	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	<p>Экспертное наблюдение и оценка на практических занятиях</p> <p>Текущий контроль:</p> <ul style="list-style-type: none"> - тестирование; - устный опрос. <p>Промежуточная аттестация – дифференцированный зачет.</p>
<p>В результате освоения учебной дисциплины обучающийся должен знать:</p> <ul style="list-style-type: none"> - понятие о механизации и автоматизации производства, их задачи. - принципы измерения, регулирование, контроля и автоматического управления параметрами технологического процесса. - основные понятия автоматизированной обработки информации. - классификацию автоматических систем и средств измерений. - общие сведения об автоматизированных системах управления (АСУ) и системах автоматического управления (САУ). 	ОК 02; ОК 04; ОК 05; ОК 09; ПК 1.1	<p>Экспертное наблюдение и оценка на практических занятиях</p> <p>Текущий контроль:</p> <ul style="list-style-type: none"> - тестирование; - устный опрос. <p>Промежуточная аттестация – дифференцированный зачет.</p>

<ul style="list-style-type: none"> - классификацию технических средств автоматизации. - измерительные устройства (датчики и исполнительные механизмы, интерфейсные, микропроцессорные и компьютерные устройства), область их применения. - типовые средства измерений, область их применения; - типовые системы автоматического регулирования технологических процессов, область их применения. - особенности производства продуктов питания из молочного и мясного сырья на автоматизированных технологических линиях в соответствии с технологическими инструкциями. 		
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3. Задания для оценивания и критерии оценки

Типовые задания для текущего контроля и оценивания по дисциплине

Текущий опрос - основной вид опроса обучающихся. В ходе текущего опроса происходит основная отработка учебного материала, закрепление знаний, отбирается материал по теме, подчёркивается главное, решающее, вырабатывается последовательность изложения. Устный ответ обучающегося должен представлять собой связанное, логически последовательное сообщение на определенную тему, показывать его умение давать определения, верно применять правила в каждом конкретном случае.

Виды текущего опроса: индивидуальный, коллективный, фронтальный, уплотненный или выборочный.

Критерии оценки устных ответов:

Оценку **«отлично»** получают ответы, в которых делаются самостоятельные выводы, дается аргументированная критика и самостоятельный анализ фактического материала на основе глубоких знаний литературы по данной теме;

Оценка **«хорошо»** ставится студенту, проявившему полное знание учебного материала, но нет должной степени самостоятельности;

Оценка **«удовлетворительно»** ставится студенту, проявившему знания основного учебного материала в объеме, необходимом для последующего обучения и предстоящей практической деятельности, но в основном обладающему необходимыми знаниями и умениями для их устранения при корректировке со стороны преподавателя.

Оценка **«неудовлетворительно»** ставится студенту, обнаружившему существенные пробелы в знании основного учебного материала, допустившему принципиальные ошибки при применении теоретических знаний, которые не позволяют ему продолжить обучение или приступить к практической деятельности без дополнительной подготовки по данной дисциплине.

Примеры проверочных контрольных заданий (тестов) после каждого раздела дисциплины.

Критерии оценки результатов тестирования

Доля правильных ответов	Оценка
Менее 70%	Неудовлетворительно
70-79%	Удовлетворительно
80-89%	Хорошо
90% и выше	Отлично

PART I

Unit 1

1. Translate following words and word combinations into Russian.

Substance consumed; nutritional support; plant or animal origin; essential nutrients; to be ingested by an organism; to be assimilated by cells; to provide energy; to maintain life; to stimulate growth; to be required by the ever increasing population; food industry; relative nutritional function; diet quality; whole grains; refined cereals; processed meat; sugar-sweetened beverages; food additives; composite dishes; savoury snacks; omnivorous humans; to obtain food; to prepare food for consumption; food energy; intensive agriculture; complex food processing; food distribution systems; conventional agriculture; fossil fuels; total greenhouse gas emissions; adequate standard of living.

2. Translate following word combinations into English.

Питательная поддержка организма; усваиваться клетками организма; энергия, необходимая постоянно растущему населению; классифицировать разными способами; соответствующее содержание; состав групп продуктов питания; относительная питательная функция; напитки, подслащенные сахаром; добывать пищу во многих различных экосистемах; система традиционного сельского хозяйства; признавать право; основополагающее право.

3. Answer the questions.

1. What does the term 'food' mean?
2. What does food usually contain?
3. How did people secure food?
4. How can food be classified? What do most systems include?
5. How does the food industry produce food?
6. Do people have the right to food? Prove it.

4. Choose the correct definitions for the following terms.

- | | |
|--------------|--|
| 1) food | a) a substance used by an organism to survive, grow, and reproduce. |
| 2) substance | b) biomolecule consisting of carbon (C), hydrogen (H) and oxygen (O) atoms, usually with a hydrogen–oxygen atom ratio of 2:1 (as in water) and thus with the empirical formula $C_m(H_2O)_n$. |
| 3) nutrient | c) any substance consumed by an organism for nutritional support. |

- | | |
|---------------------|---|
| 4) fat | d) a preparation that is added to food, typically after cooking, to impart a specific flavor, to enhance the flavor, or to complement the dish. |
| 5) protein | e) a chemical substance that cannot be broken down into other substances. |
| 6) vitamins | f) a form of matter having constant chemical composition and characteristic properties. |
| 7) chemical element | g) an ester (эфир) derived from glycerol and three fatty acids. |
| 8) carbohydrate | h) to treat or prepare by a special method, especially to treat (food) in order to preserve it. |
| 9) condiment | i) organic molecules (or a set of closely related molecules called vitamers) that are essential to an organism in small quantities for proper metabolic function. |
| 10) to process | j) large biomolecules and macromolecules that comprise one or more long chains of amino acid residues. |

5. Find the English equivalents to the following Russian words.

- | | |
|-----------------------|---|
| 1) вещество | a) sustainability b) substance c) subsistence; |
| 2) всеядный | a) omnivorous of b) carnivorous c) herbivorous; |
| 3) распределять | a) to distribute b) to divide c) to adapt; |
| 4) обеспечивать | a) to assimilate b) to stimulate c) to secure; |
| 5) состав | a) condiment b) complex c) composition; |
| 6) добавка | a) additive b) advertisement c) dairy; |
| 7) переваривать | a) to absorb b) to ingest c) to investigate; |
| 8) клетка | a) sell b) cell c) sale; |
| 9) питательный | a) nutritional b) nutrient c) nutshell; |
| 10) зерновые продукты | a) legumes b) brains c) grains. |

6. Choose the right word or word combination, complete the sentences and prove your choice.

- Food is any substance consumed _____ support for the body.
a) to give nutrient b) to provide nutritional c) to promote nutritive
- The majority of the food energy required by the ever increasing population of the world _____ by the food industry.
a) is supplying b) supplied c) is supplied
- The number and composition of food groups can _____.
a) verify b) very c) vary
- The right to food is a human right derived from the _____ on Economic, Social and Cultural Rights.
a) International Covenant b) International Convention c) Agriculture Organization
- Humans generally use cooking to prepare food for _____.
a) consumption b) composition c) contributor
- The Food and Agriculture Organization and the World Health Organization use a system with _____ food classifications.
a) nine b) ninety c) nineteen
- The substance is ingested by an organism and assimilated by the _____ to provide energy.
a) organism's cells b) organ's cells c) organism cell
- The food and _____ are one of the major contributors to climate change.
a) agriculture system b) conventional agriculture c) agricultural systems

7. Translate the following sentences into English, using a vocabulary.

1. Пища – это вещество, состоящее в основном из белков, углеводов, жиров и других питательных веществ, используемых в организме для поддержания роста и жизненных процессов, а также для получения энергии.
2. Питательные вещества – это вещества, которые обеспечивают: энергию для активности, роста и всех функций организма, таких как дыхание, переваривание пищи и поддержание тепла; материалы для роста и восстановления организма, а также для поддержания здоровья иммунной системы.
3. Человеческий организм нуждается в разнообразии следующих пяти питательных веществ – белках, углеводах, жирах, витаминах и минералах, – которые поступают из пищи, которую мы едим, чтобы оставаться здоровыми, активными и продуктивными.
4. Семена растений являются хорошим источником пищи для животных, включая человека, поскольку они содержат питательные вещества, необходимые для первоначального роста растений, в том числе много полезных жиров, таких как Омега-жиры.
5. Хорошо сбалансированная диета необходима для поддержания хорошего здоровья.
6. Витамины и минеральные это элементы необходимые для регуляции процессов в организме, некоторые из них используются для роста и замещения тканей.
7. Каждое питательное вещество имеет определенный тип химического состава и выполняет по крайней мере одну определенную функцию, когда оно переваривается и всасывается в организме.
8. Почти все продукты питания представляют собой смеси веществ, известных как питательные вещества.
9. Вода помогает регулировать температуру тела и принимает участие во многих химических реакциях.
10. Ежедневный рацион должен содержать около четырех десятков соединений и элементов.
11. Энергия в организм поступает в основном с пищей.
12. Пища – это основной жизненно важный ингредиент, который играет важную роль в поддержании, функционировании и развитии организма.

1. Translate following word combinations into Russian.

Food industry; diverse businesses; highly-mechanized industrial processes; subsistent farmer; food processing; food science; food technology; food chemistry; food engineering; commodity crops; conventional agricultural practices; cultivation of certain plants; domesticated animals; terrestrial agriculture; food production; human consumption; one-off production; batch production; mass production; just-in-time production.

2. Choose the correct definitions for the following terms.

- | | |
|----------------------------|---|
| 1) food industry | a) a production method aimed primarily at reducing times within the production system as well as response times from suppliers and to customers |
| 2) subsistence agriculture | b) a plant that can be grown and harvested extensively for profit or subsistence |
| 3) farmer | c) the production of substantial amounts of standardized products in a constant flow, including and especially on assembly lines |
| 4) batch | d) occurs when farmers grow crops to meet the needs of themselves and their families on smallholdings |
| 5) crop | e) the transformation of agricultural products into food, or of one form of food into other forms |

- | | |
|----------------------------|--|
| 6) one-off production | f) a method of manufacturing where the products are made as specified groups or amounts, within a time frame |
| 7) batch production | g) a complex, global network of diverse businesses that supplies most of the food consumed by the world's population |
| 8) mass production | h) a person engaged in agriculture, raising living organisms for food or raw materials |
| 9) just-in time production | i) a method of producing custom work, such as a one-off product for a specific customer or a small batch of work in quantities usually less than those of mass-market products |
| 10) food processing | j) a completed group, collection, or quantity of something, especially something that's just been made |

3. Choose the correct definitions for the following terms.

- | | |
|-------------------|--|
| 1) food energy | a) the movement of oxygen from the outside environment to the cells within tissues, and the removal of carbon dioxide in the opposite direction that's to the environment. |
| 2) metabolism | b) a system of measurement that is a decimal system. |
| 3) anaerobic | c) the sum of food consumed by a person or other organism. |
| 4) respiration | d) means "requiring air," in which "air" usually means oxygen. |
| 5) oxygen | e) an inorganic compound with the chemical formula H ₂ O. |
| 6) diet | f) the portion of plant-derived food that cannot be completely broken down by human digestive enzymes. |
| 7) dietary fiber | g) the set of life-sustaining chemical reactions in organisms. |
| 8) calorie | h) a unit of energy that originated from the obsolete caloric theory of heat. |
| 9) water | i) the chemical element with the symbol O and atomic number 8. |
| 10) metric system | j) chemical energy that animals (including humans) derive from their food to sustain their metabolism, including their muscular activity. |

4*. Watch the video «How to read a nutrition facts label»: <https://disk.yandex.ru/i/mUyh-KxhP3hI3A>

- a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).
 b) Formulate the 3 main ideas of the video.

Unit 2

1. Translate following words and word combinations into Russian.

Essential nutrients; body tissue; defining characteristic; from a nutritional standpoint; amino acid composition; animal (vegan) sources of protein; essential amino acids; needed for growth and maintenance; abundant kind of molecules; major structural component; mental retardation; macromolecular biological catalyst; chemical reaction; metabolic process; enzyme activity; living organism; structural component; backbone of the genetic molecule; immune system; human diet; dense source of food energy; thermal insulation; essential fatty acids.

2. Translate following word combinations into English.

Служить источником топлива; поддерживать жизнь; приводить к различным заболеваниям; превращаться в различные молекулы; увеличивать скорость реакции; снижать энергию

активации; снижать активность ферментов; выполнять множество функций; служить накопителем энергии; сахараиды и их производные; включать важные биомолекулы; наряду с; выполнять структурные и метаболические функции; производить жир из пищевых ингредиентов; за исключением.

3. Answer the questions.

1. What is protein?
2. What is the most important aspect and defining characteristic of protein?
3. What do animal sources of protein include?
4. What do vegan sources of protein include?
5. Where can protein be found in a human body?
6. What do enzymes do?
7. How do enzymes differ from most other catalysts?
8. What are the functions of carbohydrates?
9. What food products are mostly contain fats?
10. Does human body produce all kinds of fats it requires?

4. Choose the correct definitions for the following terms.

- | | |
|------------------|--|
| 1) tissue | a) an organic compound with the formula $(C_6H_{10}O_5)_n$, a polysaccharide consisting of a linear chain of several hundred to many thousands of $\beta(1 \rightarrow 4)$ linked D-glucose units |
| 2) lipids | b) a historically derived biological organizational level between cells and a complete organ; an assembly of similar cells and their extracellular matrix from the same embryonic origin that together carry out a specific function |
| 3) amino acids | c) a broad group of organic compounds which include fats, waxes, sterols, fat-soluble vitamins (such as vitamins A, D, E and K), monoglycerides, diglycerides, phospholipids, and others |
| 4) enzymes | d) proteins that act as biological catalysts by accelerating chemical reactions |
| 5) vegetarianism | e) small molecules required for the catalytic function of enzymes |
| 6) catalyst | f) the practice of abstaining from the consumption of meat (red meat, poultry, seafood, insects, and the flesh of any other animal) |
| 7) inhibitor | g) substance that prevents or decreases the rate of a chemical reaction |
| 8) cellulose | h) a carboxylic acid with an aliphatic chain, which is either saturated or unsaturated |
| 9) coenzyme | i) organic compounds that contain both amino and carboxylic acid functional groups |
| 10) fatty acid | j) a substance that speeds up a chemical reaction, or lowers the temperature or pressure needed to start one, without itself being consumed during the reaction |

5. Find the English equivalents to the following Russian words.

- | | |
|----------------|---|
| 1) кофермент | a) enzyme b) coenzyme c) lipid |
| 2) катализатор | a) catalyst b) catalyze c) cellulose |
| 3) снижать | a) to increase b) to decrease c) to include |
| 4) биомолекула | a) biochemistry b) biomolecule c) backbone |
| 5) замедлитель | a) inhibitor b) arthropod c) accelerate |
| 6) крахмал | a) starch b) tissue c) acid |

- | | |
|----------------|---|
| 7) полисахарид | a) deoxyribose b) macronutrient c) polysaccharide |
| 8) избыточный | a) abundant b) essential to c) nutritional |
| 9) обменный | a) metabolic b) enzymatic c) macronutrient |
| 10) ускорять | a) to accelerate b) to inhibit c) to catalyze |

6. Choose the right word or word combination, complete the sentences and prove your choice.

- _____ increase the rate of a reaction by lowering its activation energy.
a) Enzymes b) Carbohydrates c) Proteins
- Dietary fats are also the carriers of some flavor and aroma ingredients and vitamins that are _____.
a) water-soluble b) not water-soluble c) not indissoluble
- Fats are one of the three main _____ groups in human diet.
a) macronutrient b) dietary c) structural
- _____ deficiency and malnutrition can lead to variety of ailments including mental retardation.
a) Carbohydrates b) Fats c) Protein
- _____ serve as an energy store (e.g. starch and glycogen) and as structural components (e.g. cellulose in plants and chitin in arthropods).
a) Monosaccharides b) Polysaccharides c) Disaccharides
- Aside from water, proteins are the most _____ kind of molecules in the body.
a) essential b) abundant c) nutritional
- The most important aspect and defining characteristic of protein from a nutritional standpoint is its _____ composition.
a) amino acid b) structural component c) important biomolecules
- The _____ is a component of DNA.
a) deoxyribose b) ribose c) cellulose
- Almost all _____ in the cell need enzymes in order to occur at rates fast enough to sustain life.
a) metabolic functions b) metabolic processes c) numerous roles
- Many drugs and poisons are enzyme _____.
a) derivatives b) catalysts c) inhibitors

7. Translate the following sentences into English, using a vocabulary.

- Поскольку сложные углеводы представляют собой молекулы большего размера, чем простые углеводы, они должны быть расщеплены на простые углеводы, прежде чем их можно будет усвоить.
- Белки – это природные высокомолекулярные азотсодержащие соединения.
- Белки содержатся во всех тканях организмов, в крови, в костях.
- Вы можете получить дополнительные и необходимые витамины из различных полезных продуктов.
- Жиры содержатся в мясе, рыбе, молочных продуктах, зерне.
- Некоторые ткани организма накапливают углеводы в виде сложных углеводов, которые не могут быть использованы для получения энергии.
- Большинство авторитетных специалистов рекомендуют, чтобы от 50 до 55% от общего количества ежедневных калорий составляли углеводы, большая часть которых поступает из фруктов и овощей. фасоли и бобовых культур, а также из нерафинированных злаков.
- Процентное содержание белка, которое организм может использовать для синтеза незаменимых аминокислот, варьируется от белка к белку.
- Незаменимые жирные кислоты составляют около 7% жира, потребляемого при нормальном питании, и около 3% от общего количества калорий (около 8 граммов).

10. Жиры, полученные из растений, обычно содержат мононенасыщенные или полиненасыщенные жирные кислоты, которые, как правило, остаются жидкими при комнатной температуре.

11. Углеводы, белки и жиры являются основными типами макроэлементов в пище (питательных веществ, которые необходимы ежедневно в больших количествах).

12. Углеводы, белки и жиры перевариваются в кишечнике, где они расщепляются на свои основные составляющие: углеводы – на сахара, белки – на аминокислоты, жиры – на жирные кислоты и глицерин.

8*. Watch the video «Fats»: <https://disk.yandex.ru/i/OAudGIKCYuIvFA>

a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).

b) Formulate the 3 main ideas of the video.

1. Translate following word combinations into Russian.

Organic molecules; proper metabolic function; essential nutrient; sufficient quantities; water-soluble vitamin; fat-soluble vitamin; gastrointestinal tract; vitamin deficiency; biochemical functions; mineral metabolism; enzyme cofactors; vitamin supplement; nutritional benefit.

2. Choose the correct definitions for the following terms.

- | | |
|-----------------------|--|
| 1) vitamins | a) to separate and discharge (waste matter) from the blood, tissues, or organs |
| 2) to synthesize | b) compounds that inhibit oxidation (usually occurring as autoxidation), a chemical reaction that can produce free radicals |
| 3) vitamer | c) a manufactured product intended to supplement a person's diet by taking a pill, capsule, tablet, powder, or liquid |
| 4) to excrete | d) one of several related compounds that performs the functions of said vitamin and prevents the symptoms of deficiency of said vitamin |
| 5) to accumulate | e) a particular abnormal condition that adversely affects the structure or function of all or part of an organism and is not immediately due to any external injury |
| 6) antioxidants | f) organic molecules (or a set of closely related molecules called vitamers) that are essential to an organism in small quantities for proper metabolic function |
| 7) dietary supplement | g) a linear network of links in a food web starting from producer organisms (such as grass or algae which produce their own food via photosynthesis) and ending at an apex predator species (like grizzly bears or killer whales), detritivores (like earthworms or woodlice), or decomposer species (such as fungi or bacteria) |
| 8) trace element | h) to make (something) by combining different things; to combine (things) in order to make something new |
| 9) food chain | i) to gather or cause to increase |
| 10) disease | j) a chemical element of a minute quantity, a trace amount, especially used in referring to a micronutrient, but is also used to refer to minor elements in the composition of a rock, or other chemical substance |

3. Choose the correct definitions for the following terms.

- | | |
|----------------------------|---|
| 1) food storage | a) a way of decreasing the variability of the food supply in the face of natural, inevitable variability |
| 2) food security | b) the availability of food in a country (or a geographic region) and the ability of individuals within that country (region) to access, afford, and source adequate foodstuff |
| 3) procurement | c) the process where a general population is supplied with food |
| 4) food distribution | d) the process of complete or incomplete autoxidation or hydrolysis of fats and oils when exposed to air, light, moisture, or bacterial action, producing short-chain aldehydes, ketones and free fatty acids |
| 5) polyunsaturated fat | e) a fat that contains a polyunsaturated fatty acid (abbreviated PUFA), which is a subclass of fatty acid characterized by a backbone with two or more carbon-carbon double bonds |
| 6) rancidification | f) changing from a solid, frozen state to a liquid or soft one, because of an increase in temperature |
| 7) healthy diet | g) any of various types of cooling of a space, substance, or system to lower and/or maintain its temperature below the ambient one (while the removed heat is ejected to a place of higher temperature) |
| 8) refrigeration | h) the presence of an unwanted liquid in another substance |
| 9) thawing | i) the process of locating and agreeing to terms and purchasing goods, services, or other works from an external source, often with the use of a tendering or competitive bidding process |
| 10) moisture contamination | j) a diet that maintains or improves overall health |

Unit 3

1. Translate following words and word combinations into Russian.

Food preservation; energy input; carbon footprint; nutritional value; desirable qualities; food packaging; at a reasonable cost; food goods; shelf-life extension; package's labeling; efficient handling; single-serving packaging; precise amount; bulk commodities; enzymatic browning reaction; food preservation methods; environmental impact reduction.

2. Translate following word combinations into English.

Предотвращать размножение бактерий; вносить в пищу доброкачественные бактерии; замедлять окисление жиров; предотвращать ухудшение внешнего вида; уменьшать содержание влаги; предотвратить повторный рост; запечатывать в герметичную банку; предотвратить повторное загрязнение (заражение); создавать канцерогены; менять характеристики продуктов питания; обеспечивать защиту от химических изменений; нуждаться в защите от ударов и сжатия.

3. Answer the questions.

1. What is the aim of food preservation?

2. How can fruits be preserved?
3. Is there any difference between traditional methods and modern ones?
4. May food preservation inhibit visual deterioration? Give an example.
5. Which products may be classified as "carcinogenic to humans"?
6. What does the food packaging provide?
7. What trends became important in designing a packaging system?
8. What are the some objectives of packaging and labeling?

4. Choose the correct definitions for the following terms.

- | | |
|----------------------|--|
| 1) food preservation | a) the degree to which an object or entity (e.g., process, product, or service) satisfies a specified set of attributes or requirements |
| 2) bacteria | b) the measure of a well-balanced ratio of the essential nutrients carbohydrates, fat, protein, minerals, and vitamins in items of food or diet concerning the nutrient requirements of their consumer |
| 3) fungi | c) a process that make food more resistant to microorganism growth and slow the oxidation of fats |
| 4) oxidation | d) a chemical reaction that involves the shift, or movement, of electrons from one substance into another |
| 5) deterioration | e) any member of the group of eukaryotic organisms that includes microorganisms such as yeasts and molds, as well as the more familiar mushrooms |
| 6) sugaring | f) the surface-to-surface joining technique of materials using a substance which usually is of a different type, and which adheres to the surfaces of the two adherents to be joined, transferring the forces from one adherent to the other |
| 7) sealing | g) the process of desiccating a food by first dehydrating it, then packing it with pure sugar |
| 8) nutritional value | h) the length of time that a commodity may be stored without becoming unfit for use, consumption, or sale |
| 9) quality | i) a process of changing to an inferior state |
| 10) shelf life | j) an ubiquitous, mostly free-living organism often consisting of one biological cell |

5. Find the English equivalents to the following Russian words.

- | | |
|-------------------------|---|
| 1) окисление | a) acidation b) oxydation c) oxidation |
| 2) упаковка | a) parcel b) packaging c) packing |
| 3) химикаты | a) chemicals b) ckemicals c) chemickals |
| 4) обеззараживание | a) contamination b) recontamination c) containment |
| 5) замедление | a) regarding b) retarding c) reduce |
| 6) безвредный | a) benine b) benign c) bening |
| 7) ухудшение качества | a) deterioration b) preparation c) alteration |
| 8) питательная ценность | a) food value b) nutritional value c) nutritional price |
| 9) желаемое качество | a) desirable quality b) quantity c) suitable quantity |
| 10) консервирование | a) protection b) preservation c) containment |

6. Choose the right word or word combination, complete the sentences and prove your choice.

1. Liquids, powders, and granular materials need _____.
a) container b) contamination c) containment
2. Packages and labels communicate how to use, transport, _____ of the package or product.
a) recycle, or dispose b) recycle, or depict c) consume, or utilize
3. Small items are typically grouped together in one package _____ handling.
a) to enable effective b) to allow efficient c) to require efficient
4. Health risks of _____ that are used in food packaging need to be carefully controlled.
a) materials and chemicals b) raw materials c) packages and additives
5. Preserving fruit by turning it into jam involves _____ within an airtight jar.
a) sugaring, sealing and selling b) crushing, sugaring and boiling c) boiling, sugaring and sealing
6. Food preservation involves preventing the growth of bacteria, fungi, or other micro-organisms, as well as retarding the oxidation of fats that _____.
a) cause rancidity b) because rancidity c) cause recontamination
7. Many processes designed _____ will involve a number of food preservation methods.
a) to reserve goods b) to serve food c) to preserve food
8. Some traditional methods of preserving food have been shown to have _____ and carbon footprint.
a) a lower energy input b) a lower energy output c) a higher effort input
9. Some methods of _____ are known to create carcinogens.
a) nutrient reservation b) food preservation c) food preparation
10. Bulk commodities can be divided into packages that are _____ for individual households.
a) a more suitable size b) a less flexible size c) a more suitable amount

7. Translate the following sentences into English, using a vocabulary.

1. Герметизация – это процедура закрывания продуктов для предотвращения проникновения воздуха, которая прерывает (но не останавливает) действие вредных микроорганизмов.
2. Два типа грибов, которые играют важную роль в порче пищевых продуктов, – это дрожжи и плесневые грибки.
3. Бактерии и грибки (дрожжи и плесень) являются основными типами микроорганизмов, вызывающих порчу пищевых продуктов и болезни пищевого происхождения.
4. Пищевые продукты могут быть загрязнены микроорганизмами в любой момент во время сбора урожая, хранения, переработки, распределения, обращения с ними или приготовления.
5. Наиболее распространенными методами, используемыми либо для уничтожения, либо для уменьшения роста микроорганизмов, являются применение тепла, удаление влаги, понижение температуры во время хранения, снижение pH, контроль концентрации кислорода и углекислого газа, а также удаление питательных веществ, необходимых для роста.
6. Консервирование пищевых продуктов - это процедура, с помощью которой продукты обрабатываются, чтобы остановить или замедлить их порчу, потерю качества, съедобности или питательной ценности и, таким образом, обеспечить более длительное хранение продуктов.

7. Консервирование обычно включает в себя предотвращение развития бактерий, грибов (таких как дрожжи) и других микроорганизмов, а также замедление окисления жиров, вызывающих прогоркание.
8. Любое изменение, которое делает продукты непригодными для употребления человеком, считается порчей продуктов питания.
9. Качество пищевых продуктов ухудшается в результате химических процессов, катализируемых ферментами, таких как образование посторонних привкусов, ухудшение текстуры и потеря питательных веществ.
10. Сушка – один из самых древних методов консервирования пищевых продуктов, который снижает активность воды настолько, чтобы предотвратить рост бактерий.
11. Добавление консервантов – это химический метод консервирования пищевых продуктов.
12. Во время стерилизации микробы полностью уничтожаются.

1. Translate following word combinations into Russian.

Food contents; airtight container; shelf life; specific circumstances; canned product; edible state; acid environment; microbial-challenging environment; contaminated foodstuffs; canned non-acidic food substances; oxygen environments; dietary fiber; fresh or frozen counterparts; higher available lycopene content.

2. Choose the correct definitions for the following terms.

- | | |
|--------------------------|---|
| 1) canning | a) a substance or a chemical that is added to products such as food products, beverages, pharmaceutical drugs, paints, biological samples, cosmetics, wood, and many other products to prevent decomposition by microbial growth or by undesirable chemical changes |
| 2) freeze drying | b) a low temperature dehydration process that involves freezing the product and lowering pressure, removing the ice by sublimation |
| 3) pasteurization | c) the length of time that a commodity may be stored without becoming unfit for use, consumption, or sale |
| 4) preservative | d) a Gram-positive, rod-shaped, anaerobic, spore-forming, motile bacterium with the ability to produce the neurotoxin botulinum |
| 5) tin can | e) a rare and potentially fatal illness that begins with weakness, blurred vision, feeling tired, and trouble speaking |
| 6) shelf life | f) a method of food preservation in which food is processed and sealed in an airtight container |
| 7) airtight | g) a container for the distribution or storage of goods, made of thin metal |
| 8) edible | h) something suitable to eat |
| 9) Clostridium botulinum | i) a process of food preservation in which packaged and non-packaged foods (such as milk and fruit juices) are treated with mild heat, usually to less than 100 °C to eliminate pathogens and extend shelf life |
| 10) Botulism | j) not permitting the passage of air either in or out |

3. Choose the correct definitions for the following terms.

- | | |
|----------------|---|
| 1) food drying | a) compounds that inhibit oxidation (usually occurring as autoxidation), a chemical reaction that can produce free radicals |
|----------------|---|

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|---------------------|---|
| 2) yeasts | b) a lack of total body water with an accompanying disruption of metabolic processes |
| 3) mold | c) the process of putting water into someone's body when they are suffering from dehydration |
| 4) evaporation | d) the Portuguese word for cod and - in a culinary context - dried and salted cod |
| 5) dehydration | e) one of the structures that certain fungi can form |
| 6) rehydration | f) a type of vaporization that occurs on the surface of a liquid as it changes into the gas phase |
| 7) antioxidants | g) a time period from the beginning of writing and recorded human history to as far as late antiquity |
| 8) bacterial growth | h) eukaryotic, single-celled microorganisms classified as members of the fungus kingdom |
| 9) ancient history | i) a method of food preservation in which food is dried (dehydrated or desiccated) |
| 10) bacalhau | j) proliferation of bacterium into two daughter cells, in a process called binary fission |

4*. Watch the video «Salmonellosis - causes, symptoms, diagnosis, treatment, pathology»:
<https://disk.yandex.ru/i/a4uXT4VCv9jMPg>

- a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).**
b) Formulate the 3 main ideas of the video.

Revision to Part I

STEP 1.

Create your own presentation for one of the following topics and deliver a speech to your group mates:

(Use the recommendations <https://disk.yandex.ru/i/s6UjxcwiBig-xw>).

Unit 1.

Imagine you are a representative of a food production company. Tell us about the products that your company produces.

Specify the type of production (One-off production, Mass production, Just-in-time (JIT) production). What products does it produce: ingredients, composition, nutritional value, production method, target audience of consumers, etc.?

Make a report about your production in the form of an advertising story. Illustrate your story with a presentation.

Unit 2.

Choose any dish that includes at least five ingredients. Specify:

- products which the dish is made of;
- the type of preparation of products or the final dish (stewing, smoking, canning, etc.);
- chemical qualitative and quantitative composition (proteins, fats, carbohydrates in grams per 100 g of the finished product); vitamins, minerals;
- nutritional value;
- possible allergic reactions (to which specific product) or food intolerance (specify the reason).

Present the data in the form of a report with a presentation.

Unit 3.

Consider two different packages of any product or develop your own version of the package. Specify:

- type of product;
- material used for packaging;
- what types of product spoilage does this packaging eliminate;
- what information for consumers is contained on the packaging;
- give a comparative analysis of both types of packaging.

Present the data in the form of a report with a presentation.

STEP 2.

Think of some recommendations (advices) and make a written report about your family's traditions. Express your opinion and give some facts if it possible.

PART II

Unit 4

1. Translate following words and word combinations into Russian.

Freezing food; residual moisture; food commodity industry; cryogenic process; flash freezing; quality and texture, cellular structure; due to; preserving food; household freezer; as soon as possible; to store correctly; added preservatives; food spoilage; low-term preservation; frozen food market; cost-effective market; vast majority; refrigerating line; gaseous state.

2. Translate following word combinations into English.

Быть подготовленным; в течение зимнего сезона; замедлить разложение; подавлять рост бактерий; сохранять продукты питания; образовывать кристаллы льда; сверхнизкая температура жидкого азота; при поддержке; быть достаточным самим по себе; предотвращать порчу продуктов; призвать к чему-либо; стабилизатор без вкуса и запаха; путем циркуляции хладагента; отводить тепло; передать в конденсатор; рассеиваться в воздухе и воде; пропускать через удлинительный клапан; быть вновь введенным; твердый диоксид углерода.

3. Answer the questions.

1. Why we need freezing to preserve food?
2. What methods are used In the food commodity industry?
3. Do frozen products require any added preservatives?
4. How do mechanical freezers function?
5. Where is cryogenic of food used?

4. Choose the correct definitions for the following terms.

- 1) freezing a) to keep, set aside, or accumulate for future use

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|------------------------|--|
| 2) decomposition | b) a phase transition where a liquid turns into a solid when its temperature is lowered below its freezing point |
| 3) moisture | c) nitrogen in a liquid state at low temperature |
| 4) to inhibit | d) the process by which dead organic substances are broken down into simpler organic or inorganic matter such as carbon dioxide, water, simple sugars and mineral salts |
| 5) freezing technology | e) the quickest technology available due to the ultra low liquid nitrogen temperature -196°C |
| 6) to store | f) the presence of a liquid, especially water, often in trace amounts |
| 7) refrigerant | g) the production and behaviour of materials at very low temperatures |
| 8) ammonia | h) to keep someone from doing something. to block a process |
| 9) cryogenics | i) a working fluid used in the refrigeration cycle of air conditioning systems and heat pumps where in most cases they undergo a repeated phase transition from a liquid to a gas and back again |
| 10) liquid nitrogen | j) an inorganic chemical compound of nitrogen and hydrogen with the formula NH_3 |

5. Find the English equivalents to the following Russian words.

- | | |
|-----------------|---|
| 1) заморозка | a) freezing b) fertilizing c) cooling |
| 2) сохранение | a) preservation b) processing c) preparation |
| 3) разбавлять | a) to alter b) to adulterate c) to affect |
| 4) разложение | a) decoration b) decompression c) decomposition |
| 5) замедлять | a) to enhance b) to inhibit c) to inherit |
| 6) качество | a) quality b) quantity c) qualification |
| 7) обеспечивать | a) to produce b) to promote c) to provide |
| 8) хранение | a) storage b) stoppage c) species |
| 9) технология | a) texture b) technique c) technology |
| 10) приготовить | a) to prolong b) to predict c) to prepare |

6. Choose the right word or word combination, complete the sentences and prove your choice.

- _____ preserves it from the time it is prepared to the time it is eaten.
a) Freezing food b) Curing food c) Freezing equipment
- Freezing food _____ by turning residual moisture into ice, inhibiting the growth of most bacterial species.
a) slows down decomposition b) inhibits decomposition c) prevents decomposition
- The freezing kinetics is important to preserve the food _____.
a) quality and taste b) quality and texture c) quantity and structure
- _____ generates smaller ice crystals and maintains cellular structure.
a) Cryogenic freezing b) Low temperature freezing c) Quicker freezing
- Frozen products do not require any _____ because microorganisms do not grow when the temperature of the food is below -9.5°C (15°F).
a) added stabilizers b) artificial preservatives c) added preservatives
- _____ of food may call for food storage at even lower temperatures.
a) Long-term preservation b) Short-term preservation c) Long-term storage
- The freezing technique itself, just like the frozen food market, is developing to become faster, _____.
a) more effective and time-saving b) more efficient and more cost-effective c) more efficient and productive
- _____ uses very low temperature gases which are applied directly to the food product.

- a) Cryogenic technology b) Freezing equipment c) Cryogenic equipment
 9. This heat is then transferred to a condenser and dissipated into _____.
 a) energy and liquid b) air or water c) gas and water
 10. Flash freezing of food is a more _____, but is used by many leading food manufacturers all over the world.
 a) recent development b) old technique c) new method

7. Translate the following sentences into English, using a vocabulary.

1. Низкие температуры используются для замедления химических реакций и действия пищевых ферментов, а также для замедления или остановки роста микроорганизмов в пище.
2. Чем ниже температура, тем медленнее будут протекать химические реакции, действие ферментов и рост микроорганизмов.
3. Низкие температуры используются для замедления химических реакций.
4. Термин «холодное хранение» может быть применен к любому снижению нормальной температуры пищевых продуктов.
5. Используемая температура зависит от характера продукта и условий хранения.
6. Этот метод обычно включает охлаждение льдом или механическим охлаждением.
7. Температура охлаждения выбирается в зависимости от вида продукта.
8. Используемый хладагент зависит от того, какие продукты замораживаются.

8*. Watch the video «How flash-freezing preserves food quality»:

<https://disk.yandex.ru/i/K4aFrrwRhaMSg>

- a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).
- b) Formulate the 3 main ideas of the video.

1. Translate following word combinations into Russian.

Anaerobic fermentation; pickling procedure; food's texture and flavor; pickling medium; distinguishing characteristic; perishable foods; antimicrobial herbs and spices; sufficient moisture; pickling brine; natural fermentation; room temperature; lactic acid bacteria; required acidity; canning process; salinity of the solution; exclusion of oxygen; out-of-season use; nutritional value; produced by bacteria; chemical pickling; commercial pickling; preservation agent; lactic acid.

2. Choose the correct definitions for the following terms.

- | | |
|-----------------------|--|
| 1) anaerobic organism | a) a metabolic process that produces chemical changes in organic substances through the action of enzymes |
| 2) brine | b) an agent that destroys bacteria |
| 3) vinegar | c) the amount of acid present in a solution, often expressed in terms of pH |
| 4) perishable food | d) a broader term used for the process of applying microbes for the large-scale production of chemicals, biofuels, enzymes, proteins and pharmaceuticals |
| 5) preservation agent | e) food, that typically spoils within a relatively short amount of time, such as fruits, vegetables, meats, and dairy products |
| 6) solution | f) a special type of homogeneous mixture composed of two or more substances |

- | | |
|-----------------------------|---|
| 7) salinity | g) the dissolved salt content of a body of water |
| 8) acidity | h) any organism that does not require molecular oxygen for growth |
| 9) fermentation | i) a high-concentration solution of salt (typically sodium chloride or calcium chloride) in water |
| 10) industrial fermentation | j) an aqueous solution of acetic acid and trace compounds that may include flavorings |

3. Make a list of key phrases from the text and compose your own sentences using these word combinations.

4*. Watch the video «What even is lacto-fermentation»:

<https://disk.yandex.ru/i/aqSNmmYEj9yRjA>

a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).

b) Formulate the 3 main ideas of the video.

5. Choose the correct definitions for the following terms.

- | | |
|-------------------|--|
| 1) smoking | a) a building where meat or fish is cured with smoke |
| 2) pellicle | b) to burn slowly with smoke but without flames |
| 3) flavoring | c) a deep round-bottomed cooking pan of Chinese origin |
| 4) smokehouse | d) a cooking method that uses dry heat where hot air covers the food, cooking it evenly on all sides with temperatures of at least 150 °C from an open flame, oven, or other heat source |
| 5) emanation | e) a water-soluble yellow to red liquid used as a flavoring as a substitute for cooking with wood smoke while retaining a similar flavor |
| 6) smoke roasting | f) a skin or coating of proteins or cellulose on the surface of meat (e.g. smoked salmon) or fermented beverages |
| 7) to smolder | g) any process that has the attributes of both roasting and smoking |
| 8) liquid smoke | h) "act of flowing or issuing from an origin; emission; radiation; what issues, flows, or is given out from any substance or body |
| 9) roasting | i) the process of flavoring, browning, cooking, or preserving food by exposing it to smoke from burning or smoldering material, most often wood |
| 10) wok | j) a food additive used to improve the taste or smell of food |

6*. Watch the video «How smoke preserves food»: **<https://disk.yandex.ru/i/wjtR3T1a8QuGWg>**

a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).

b) Formulate the 3 main ideas of the video.

Unit 5

1. Translate following words and word combinations into Russian.

Metabolic process; organic substances; extraction of energy; activity of microorganisms; desirable change; sour foods; industrial fermentation; scientific definition; preservation method; large-scale microbial process; acidic dairy products; electron transport system; specially designed growth medium; to supply the nutrients; variety of media; nitrogen source; grape must; sugar cane juice; to eliminate antinutrients; to remove microbes; storing vessels; food borne illness.

2. Translate following word combinations into English.

Вызывать химические изменения в органических веществах под действием ферментов; извлечение энергии из углеводов в отсутствие кислорода; приводить к желаемым изменениям в пищевом продукте или напитке; наука о ферментации; процессе, при котором образуется молочная кислота; ферментация происходит; применение микробов для крупномасштабного производства химических веществ; методы консервации пищевых продуктов; метаболический процесс; в анаэробных условиях; микробы или эукариотические клетки; обеспечивать питательные вещества; кукурузный ликер для заваривания; служить основным целям; обогащать рацион; щелочная ферментация; устранять антипитательные вещества; удалять микробы из оборудования и емкостей для хранения; размножение вредных организмов; риск заболеваний пищевого происхождения; при неправильном консервировании; эпидемиологические исследования.

3. Answer the questions.

1. How is term 'fermentation' used?
2. Is fermentation in food processing the conversion of carbohydrates?
3. In what kind of products does fermentation act in a preservation process?
4. Can we call fermentation an artificially made process?
5. What happens in industrial fermentation?
6. What is the function of microbes or eukaryotic cells?
7. What do different (growth) media invariably contain?
8. What purposes does food fermentation serve?
9. Why is sterilization important during fermentation of foods?
10. How to indicate harmful bacteria in the food?

4. Choose the correct definitions for the following terms.

- | | |
|------------------|--|
| 1) fermentation | a) a metabolic process that produces chemical changes in organic substances through the action of enzymes |
| 2) microorganism | b) essential dietary elements required by organisms in varying quantities throughout life to orchestrate a range of physiological functions to maintain health |
| 3) zymology | c) the absence or limited presence of oxygen in a particular environment |

- | | |
|-------------------------|--|
| 4) pickling | d) an aqueous solution of acetic acid and trace compounds that may include flavorings |
| 5) anaerobic conditions | e) an acidic, colourless liquid and organic compound with the chemical formula CH_3COOH |
| 6) eukaryotes | f) organisms whose cells have a membrane-bound nucleus |
| 7) micronutrients | g) any substance, radionuclide, or radiation that promotes carcinogenesis (the formation of cancer) |
| 8) vinegar | h) the process of preserving or extending the shelf life of food by either anaerobic fermentation in brine or immersion in vinegar |
| 9) acetic acid | i) an applied science that studies the biochemical process of fermentation and its practical uses |
| 10) carcinogen | j) an organism of microscopic size, which may exist in its single-celled form or as a colony of cells |

5. Find the English equivalents to the following Russian words.

- | | |
|---------------------|--|
| 1) брожение | a) fermentation b) preservation c) sterilization |
| 2) зимология | a) zymology b) zymurgy c) zymase |
| 3) азот | a) carbon b) nitrogen c) ethanol |
| 4) кислота | a) alkaline b) vinegar c) acid |
| 5) анаэробный | a) eukaryotic b) anaerobic c) metabolic |
| 6) насыщать | a) to eliminate b) to enrich c) to reduce |
| 7) маринованный | a) pickled b) marinated c) fermented |
| 8) консервированный | a) cannery b) sealed c) canned |
| 9) фермент | a) enzyme b) acid c) substrate |
| 10) канцерогенный | a) carcinogenic b) cancinogenic c) cancerogenic |

6. Choose the right word or word combination, complete the sentences and prove your choice.

- The science of fermentation is known as _____.
a) zymurgy b) zymology c) enzymology
- Any metabolic process that _____ from a sugar or other organic molecule, does not require oxygen or an electron transport system.
a) releases energy b) restricts energy c) eliminate antinutrients
- Botulism in vegetable ferments is only possible when not properly _____.
a) pickled b) cooked c) canned
- _____ is an important factor to consider during the fermentation of foods.
a) Sterilization b) Discoloration c) Production
- The microbes or _____ used for fermentation grow in (or on) specially designed growth medium.
a) essential amino acids b) eukaryotic cells c) food substrates
- _____ is a broader term used for the process of applying microbes for the large-scale production of chemicals, biofuels, enzymes, proteins and pharmaceuticals.
a) Industrial fermentation b) Production method c) Large-scale fermentation
- _____ are typically sugars or other carbohydrates.
a) Carbon resources b) Nitrogen sources c) Carbon sources
- The production of off smells and discoloration may be indications that _____.
a) useful bacteria b) harmful bacteria c) harmful bacterium
- The World Health Organization has classified pickled foods as possibly carcinogenic, based on _____.
a) epidemiological studies b) pandemic research c) epidemiological reports

10. Fermentation also occurs within the _____ of all animals, including humans.
a) digestive system b) gastrointestinal tracts c) stomach chamber

7. Translate the following sentences into English, using a vocabulary.

1. Ферментация – это химическое расщепление сахара микроорганизмами, такими как бактерии или дрожжи, в результате чего образуется газ, тепло или другие побочные продукты.
2. В биологии ферментация – это метаболический процесс, который преобразует углеводы, такие как сахара, в более простые вещества, такие как спирт или кислоты, под действием микроорганизмов или ферментов.
3. В процессе ферментации анаэробные микробы используют ферменты для превращения крахмала или сахаров в спирт или кислоты.
4. Когда анаэробные микробы начинают работать, углекислый газ образует пузырьки (как в газировке), и иногда они превращают его в спирт.
5. В мышечных клетках в результате ферментации образуется молочная кислота.
6. Молочнокислая ферментация, наряду с другими биохимическими процессами, участвует в производстве различных видов сыра.
7. Микробиологическая ферментация означает, что процесс ферментации осуществляется экосистемой микробов.
8. Ферментация этанола в основном используется для приготовления алкогольных напитков, таких как пиво, и производства топлива на основе этанола.
9. Ферментация показывает нам, что микроорганизмы могут быть отличным биотехнологическим ресурсом.
10. Уксусная кислота также известна как уксус.

1. Translate following word combinations into Russian.

Eukaryotic microorganisms; fungal species; multicellular characteristics; budding cells; asymmetric division process; carbon dioxide; cell biology research; leavening agent; fermentable sugars; natural contaminants; bread dough; dough proofing.

2. Choose the correct definitions for the following terms.

- | | |
|--------------------|---|
| 1) yeasts | a) a step in the preparation of yeast bread and other baked goods in which the dough is allowed to rest and rise a final time before baking |
| 2) eukaryotes | b) the largest group of organisms in which any two individuals of the appropriate sexes or mating types can produce fertile offspring, typically by sexual reproduction |
| 3) microorganism | c) a type of asexual reproduction in which a new organism develops from an outgrowth or bud due to cell division at one particular site |
| 4) species | d) a loaf pan, is a kitchen utensil in the form of a container in which bread is baked |
| 5) budding | e) organisms whose cells have a membrane-bound nucleus |
| 6) proofing | f) any one of a number of substances used in doughs and batters that cause a foaming action (gas bubbles) that lightens and softens the mixture |
| 7) leavening agent | g) an organism of microscopic size, which may exist in its single-celled form or as a colony of cells |
| 8) bread pan | h) to work dough, to pummel and press raw dough in order to facilitate the rising process, usually by hand |

- | | |
|--------------|--|
| 9) dough | i) eukaryotic, single-celled microorganisms classified as members of the fungus kingdom |
| 10) to knead | j) a thick, malleable, sometimes elastic paste made from grains or from leguminous or chestnut crops |

3*. Watch the video «How Does Yeast Make Bread?»:

<https://disk.yandex.ru/i/XgI7nNiO1pkUQQ>

a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).

b) Formulate the 3 main ideas of the video.

4. Choose the correct definitions for the following terms.

- | | |
|---------------------------|--|
| 1) baking | a) a method of preparing food that uses dry heat, typically in an oven, but can also be done in hot ashes, or on hot stones |
| 2) oven | b) a staple food prepared from a dough of flour (usually wheat) and water, usually by baking |
| 3) dough | c) an establishment that produces and sells flour-based food baked in an oven such as bread, cookies, cakes, doughnuts, bagels, pastries, and pies |
| 4) bread | d) a tool which is used to expose materials to a hot environment; it contains a hollow chamber and provides a means of heating the chamber in a controlled way |
| 5) baker | e) a thick, malleable, sometimes elastic paste made from grains or from leguminous or chestnut crops |
| 6) bakery | f) a tradesperson who bakes and sometimes sells breads and other products made of flour by using an oven or other concentrated heat source |
| 7) dutch oven | g) a process of breaking down of intermolecular bonds of starch molecules in the presence of water and heat, allowing the hydrogen bonding sites (the hydroxyl hydrogen and oxygen) to engage more water |
| 8) a peel | h) a thick-walled cooking pot with a tight-fitting lid |
| 9) starch | i) a polymeric carbohydrate consisting of numerous glucose units joined by glycosidic bonds |
| 10) starch gelatinization | j) a tool used by bakers to slide loaves of bread, pizzas, pastries, and other baked goods into and out of an oven |

Unit 6

1. Translate following words and word combinations into Russian.

Liquid food; mammary glands; solid food; milk immunity; early-lactation milk; mammary secretion; milking animal; agricultural product; dairy milk; dairy cow; to produce lactase; to digest lactose; source of nutrition; condensed milk; powdered milk; food-additive; saturated fat.

2. Translate following word combinations into English.

Укреплять иммунную систему; снижать риск заболеваний; постоянно растущий спрос на молочные продукты; употреблять молоко после младенчества; основной источник питания;

иммуномодулирующий компонент; крупнейший в мире производитель молока; домашнее хозяйство, занимающееся молочным животноводством; международно признанные стандарты; младенцы на грудном вскармливании; производство молока животного происхождения; сухое обезжиренное молоко; одомашненные копытные; тонкий кишечник человека.

3. Answer the questions.

1. What is milk?
2. What does milk contain?
3. How does milk influence immunity?
4. What does the term 'dairy products' refer to?
5. What countries are among the largest exporters of milk products?
6. What does the US Centers for disease Control and Production recommend for the children?
Is this recommendation appropriate for all the children universally?
7. Are milk cows the only source of milk? What are the examples of domesticated ungulates?
8. Can adult people consume milk / milk products?
9. What is lactase? What is lactose?
10. What is milk processed into?
11. What products contain high levels of saturated fat?

4. Choose the correct definitions for the following terms.

- | | |
|-------------------------|--|
| 1) milk | a) an endothermic vertebrate animal of the class Mammalia, characterized by the presence of mammary glands (specialized sweat glands that secrete nutritious milk — i.e. lactation — for feeding newborn offsprings) |
| 2) mammal | b) a white liquid food produced by the mammary glands of mammals |
| 3) colostrum | c) milk sugar, is a disaccharide sugar synthesized by galactose and glucose subunits and has the molecular formula $C_{12}H_{22}O_{11}$ |
| 4) antibody | d) first milk, is the first form of milk produced by the mammary glands of humans and other mammals immediately following delivery of the newborn |
| 5) lactose | e) an enzyme produced by many organisms |
| 6) lactase | f) a network of biological systems that protects an organism from diseases |
| 7) dairy products | g) a family of related phosphoproteins that are commonly found in mammalian milk, comprising about 80% of the proteins in cow's milk and between 20% and 60% of the proteins in human milk |
| 8) casein | h) large, Y-shaped protein used by the immune system to identify and neutralize foreign objects such as pathogenic bacteria and viruses |
| 9) immune system | i) the problem caused by a lessened ability or a complete inability to digest lactose, a sugar found in dairy products |
| 10) lactose intolerance | j) food products made from (or containing) milk |

5. Find the English equivalents to the following Russian words.

- | | |
|---------------------------|---|
| 1) лактоза | a) lactose b) lactase c) maltose |
| 2) сгущенное молоко | a) powdered milk b) condensed milk c) concentrated milk |
| 3) лактаза | a) enzyme b) lactase c) lactation |
| 4) молочный | a) mammal b) milk c) dairy |
| 5) крупный рогатый скот | a) mammal b) milk c) dairy |
| 6) непереносимость молока | a) milk resistance b) milk tolerance c) milk intolerance |
| 7) иммуномодулирующий | a) immune-modulating b) immunity modeling c) immune improvement |
| 8) усваивать | a) to allow b) to digest c) to decline |
| 9) случайная мутация | a) chance mutation b) change mutation c) chase mutation |
| 10) обезжиренный | a) skimmed b) saturated c) scammed |

6. Choose the right word or word combination, complete the sentences and prove your choice.

- The term _____ refers to animal milk and animal milk production.
a) daily b) dairy c) dairy
- More than six billion people worldwide _____ milk and milk products.
a) produce b) obtain c) consume
- Those groups who continue _____ milk have often exercised great creativity in using the milk of domesticated ungulates.
a) to tolerate b) to drink c) to digest
- Thousands of years ago, a chance mutation spread in human populations in northwestern Europe that enabled the production of _____ in adulthood.
a) lactose b) lactase c) lactulose
- Milk _____ into a variety of products such as cream, butter, yogurt, kefir, ice cream, and cheese.
a) is produced b) is processing c) is processed
- Whole milk, butter, and cream have high levels of _____.
a) saturated fat b) unsaturated fat c) saturated protein
- _____ contains antibodies that strengthen the immune system and thus reduce the risk of many diseases.
a) Colostrum b) Milk c) Solid food
- In many cultures, especially in the West, humans continue to consume milk _____, using the milk of other mammals as a food product.
a) beyond infancy b) after infancy c) beyond infancy
- India is the world's largest producer of milk and the _____ of skimmed milk powder.
a) leading importer b) leading exporter c) lending exporter
- The sugar lactose is found only in _____.
a) milk b) colostrum c) human small intestine

7. Translate the following sentences into English, using a vocabulary.

- В некоторых странах почти половина производимого молока потребляется в виде свежего пастеризованного цельного, нежирного или обезжиренного молока.
- Однако большая часть молока перерабатывается в более стабильные молочные продукты, которые продаются по всему миру, такие как сливочное масло, сыр, сухое молоко, мороженое и сгущенное молоко.

3. Хотя молоко является жидкостью и чаще всего считается напитком, оно содержит от 12 до 13 процентов общего количества сухих веществ и, возможно, должно рассматриваться как пищевой продукт.
4. Белки, содержащиеся в материнском молоке, являются основными компонентами, способствующими ускорению роста молодняка животных.
5. В женском молоке относительно мало белков и минералов по сравнению с молоком коров и коз.
6. Овечье молоко богато питательными веществами, в нем содержится 18 процентов сухих веществ (5,8 процента белка и 6,5 процента жира).
7. В оленьем молоке самый высокий уровень питательных веществ – 36,7% от общего количества сухих веществ (10,3% белка и 22% жира).
8. Это молоко с высоким содержанием жира и белка является отличным ингредиентом для сыра и других молочных продуктов промышленного производства.
9. Основными компонентами молока являются вода, жир, белок, углеводы (лактоза) и минеральные вещества (зола).
10. Белки повышают питательную ценность молока и других молочных продуктов и обеспечивают определенные характеристики, используемые для многих методов обработки.
11. Жир, содержащийся в молоке, выделяется специализированными клетками молочных желез млекопитающих.
12. В обезжиренном молоке, из которого удалено более 99,5% молочного жира, значительно меньше холестерина, чем в цельном молоке (2 миллиграмма на 100 граммов молока по сравнению с 14 миллиграммами для цельного молока), и оно должно быть обогащено витамином А. (to fortify – обогащать)

8*. Watch the video «Lactose intolerance - causes, symptoms, diagnosis, treatment & pathology»: <https://disk.yandex.ru/i/jRkAQGwRII0T4Q>

- a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).
- b) Formulate the 3 main ideas of the video.

1. Translate following word combinations into Russian.

Fermented milk product; cultured dairy foods; lactic acid bacteria; fermentation process; digestibility of milk; dairy drinks; cultured buttermilk; curdling / clabbering of milk; rising agent; sodium bicarbonate.

2. Choose the correct definitions for the following terms.

- | | |
|----------------------------|---|
| 1) fermented milk products | a) the breakdown of large insoluble food compounds into small water-soluble components so that they can be absorbed into the blood plasma |
| 2) Lactobacillales | b) a type of soured milk produced by allowing unpasteurized milk to turn sour (ferment) at a specific humidity and temperature |
| 3) buttermilk | c) the sharp, sour taste of certain foods or beverages |
| 4) sourness | d) a fermented dairy drink, the liquid left behind after churning butter out of cultured cream |
| 5) curdling | e) an organic acid with a molecular formula $\text{CH}_3\text{CH}(\text{OH})\text{COOH}$ |
| 6) lactic acid | f) a dairy product made from the fat and protein components of churned cream |

- | | |
|--------------|--|
| 7) tartness | g) the breaking of an emulsion or colloid into large parts of different composition through the physio-chemical processes of flocculation, creaming, and coalescence |
| 8) digestion | h) are an order of gram-positive, low-GC, acid-tolerant, generally nonsporulating, nonrespiring, either rod-shaped (bacilli) or spherical (cocci) bacteria that share common metabolic and physiological characteristics |
| 9) butter | i) the taste that detects acidity |
| 10) clabber | j) dairy foods that have been made by fermenting milk with lactic acid bacteria such as Lactobacillus, Lactococcus, and Leuconostoc |

3. Choose the correct definitions for the following terms.

- | | |
|-----------------|--|
| 1) cheese | a) something as small, concise, and tightly packed |
| 2) casein | b) a dairy product produced in wide ranges of flavors, textures, and forms by coagulation of the milk protein casein |
| 3) curd | c) the liquid remaining after milk has been curdled and strained |
| 4) denaturation | d) an Italian hard, granular cheese produced from cows' milk and aged at least 12 months |
| 5) whey | e) a traditional yogurt or fermented milk product, originating from and popular throughout the Indian subcontinent, usually prepared from cow's milk |
| 6) butterfat | f) the craft of making cheese |
| 7) cheesemaking | g) a family of related phosphoproteins that are commonly found in mammalian milk, comprising about 80% of the proteins in cow's milk and between 20% and 60% of the proteins in human milk |
| 8) parmesan | h) a process in which proteins or nucleic acids lose the quaternary structure, tertiary structure, and secondary structure |
| 9) brie | i) a soft cow's-milk cheese named after Brie, the French region from which it originated |
| 10) compact | j) the fatty portion of milk. Milk and cream are often sold according to the amount of this kind they contain |

Revision to Part II

STEP 1.

Create your presentation for one of the following topics and deliver a speech to your group mates: (Use the recommendations <https://disk.yandex.ru/i/s6UjxcwiBigxw>).

Unit 4.

Choose any product that can be pickled, smoked, dried or preserved. Specify:

- type of product;
- additional ingredients required for pickling (smoking/drying/preservation);
- cooking conditions;
- describe how and why does the appearance and taste of the finished product change compared to raw;
- due to which the shelf life of the finished product increases.

Present the data in the form of a report with a presentation.

Unit 5.

Tell us about the traditional national bakery product. Specify:

- ingredients;
 - necessary equipment and cooking time;
 - cooking conditions (temperature, pressure, etc.);
 - chemical qualitative and quantitative composition of the finished product;
 - external and taste qualities of the finished product;
 - the history of the recipe creation, cultural traditions associated with the use of this product.
- Present the data in the form of a report with a presentation.

Unit 6.

Tell us about the process of industrial or household preparation of any kind of dairy products. Specify:

- raw materials;
- necessary equipment;
- cooking time;
- cooking conditions (temperature, pressure, etc.);
- chemical qualitative and quantitative composition of the finished product;
- external and taste qualities of the finished product;
- conditions and terms of storage of the finished product;
- examples of the use of the finished product in food.

Present the data in the form of a report with a presentation.

STEP 2.

Think of some recommendations (advices) and make a written report about your opinion and give some facts if it possible.

PART III

Unit 7

1. Translate following words and word combinations into Russian.

Generalized name; short-chain; soluble carbohydrates; to be composed of; granulated sugar; to hydrolyze into fructose and glucose; chemically-different substances; artificial sweeteners; tissues of plants; expansion in production; to rely on; root crop; methods for extracting; indentured labour; refined sugars; obesity; diabetes; dementia; tooth decay, because of; to try to clarify the position.

2. Translate following word combinations into English.

Состоять из углерода, водорода и кислорода; становиться доступным для обычных людей; обладать сладким вкусом; этнический состав и политическая структура; вовлекать в качестве причины к возникновению; метода добычи (получения); могут быть получены из разных источников; низкокалорийные заменители пищи; выращивать в тропическом климате; страны, контролирующие торговлю сахаром; сердечнососудистые заболевания; дегенерация желтого пятна.

3. Answer the questions.

1. What is sugar?
2. What are carbohydrates composed of?
3. Where are sugars found?

4. Are all substances having a sweet taste classified as sugars?
5. Is a diet high in sugars good for human health?

4. Choose the correct definitions for the following terms.

- | | |
|-------------------------|--|
| 1) soluble object | a) the generic name for sweet-tasting, soluble carbohydrates, many of which are used in food |
| 2) glucose | b) a species of (often hybrid) tall, perennial grass that is used for sugar production |
| 3) fructose | c) a sugar with the molecular formula $C_6H_{12}O_6$ |
| 4) galactose | d) a ketonic simple sugar found in many plants, where it is often bonded to glucose to form the disaccharide sucrose |
| 5) oligosaccharide | e) a monosaccharide sugar that is about as sweet as glucose, and about 65% as sweet as sucrose |
| 6) artificial sweetener | f) a saccharide polymer containing a small number (typically three to ten) of monosaccharides (simple sugars) |
| 7) substitute | g) to break it up or weaken it, making it no longer recognizable |
| 8) sugarcane | h) a food additive that may be derived through manufacturing of plant extracts or processed by chemical synthesis |
| 9) sugar | i) something that can be dissolved or dispersed in a liquid, such as water |
| 10) to dissolve | j) a product or service that can be easily replaced with another by consumers |

5. Find the English equivalents to the following Russian words.

- | | |
|----------------------|---|
| 1) короткая цепь | a) block chain b) short-chain c) small change |
| 2) состоять из | a) be composed of b) be compared with c) be included in |
| 3) получать из | a) be derived from b) be driven by c) be different from |
| 4) углерод | a) oxygen b) hydrogen c) carbon |
| 5) мальтоза | a) fructose b) maltose c) glucose |
| 6) сахарный тростник | a) sugarcane b) sugar beet c) honeycomb |
| 7) влажность | a) humidity b) hydrogen c) extraction |
| 8) быть связанным с | a) be linked with b) be similar to c) be linked to |
| 9) растворимый | a) artificial b) soluble c) to hydrolyze |
| 10) дисахарид | a) monosaccharide b) disaccharide c) oligosaccharide |

6. Choose the right word or word combination, complete the sentences and prove your choice.

1. Sugar is the generalized name for sweet, short-chain, _____, many of which are used in food.
a) flexible carbohydrates b) soluble carbohydrates c) hydrolyzed sucrose
2. _____ of sugars are called oligosaccharides.
a) Short chains b) Complex chains c) . Longer chains
3. Since the latter part of the twentieth century, it has been questioned whether a diet high in sugars, especially _____, is good for human health.
a) refined sugars b) purified sugars c) simple sugars
4. _____ and trade have changed the course of human history in many ways.
a) Sugar production b) Sugar consumption c) Sugar extraction

5. The table or granulated sugar most customarily used as food is _____ , a disaccharide..
a) maltose b) glucose c) sucrose
6. There are various types of _____ derived from different sources.
a) sugar b) honey c) carbohydrates
7. The average person consumes about 24 _____ of sugar each year.
a) grams b) kilocalories c) kilograms
8. _____ refers to any of several species of giant grass in the genus *Saccharum* that have been cultivated in tropical climates in South Asia and Southeast Asia since ancient times.
a) Sugar beet b) Sugarcane c) Beta vulgaris
9. _____ may also have a sweet taste, but are not classified as sugars.
a) Chemically-different substances b) Chemically-similar substances c) Chemically-different substitutes
10. In the body, sucrose hydrolyses into _____.
a) fructose and glucose b) sucrose and maltose c) glucose and lactose

7. Translate the following sentences into English, using a vocabulary.

1. Сахароза – это дисахарид, или двойной сахар, состоящий из одной молекулы глюкозы, связанной с одной молекулой фруктозы.
2. Столовый сахар – это общее название сахара, известного как сахароза.
3. Сахар – это простой углевод, вещество, которое дает нам энергию.
4. Диета с высоким содержанием сахара часто связана с ожирением, а слишком большое количество сладких продуктов может привести к разрушению зубов.
5. Сахара, с которыми мы наиболее знакомы, состоят из шести атомов углерода и называются моносахаридами или простыми сахарами.
6. Мальтоза, которая состоит из двух глюкозных звеньев, является продуктом частичного разложения крахмала.
7. Рафинированный сахар (столовый сахар) содержит калории без каких-либо других питательных веществ.
8. Столовый сахар практически на 100% состоит из чистой сахарозы и не содержит других питательных веществ; коричневый сахар – это менее высокоочищенная сахароза.
9. Сахар используется как в качестве подсластителя, так и в качестве консерванта.
10. Широко используемый вариант, известный как сахароза, получают из двух основных источников: сахарного тростника, выращиваемого в тропических и субтропических регионах, и сахарной свеклы.
11. Типы сахаров включают глюкозу или «сахар крови», фруктозу, содержащуюся во фруктах, и лактозу, которая является молочным сахаром.

8*. Watch the video «Carbohydrates & sugars – biochemistry»:

https://disk.yandex.ru/i/TtjZeREXSl_yJg

- a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).
- b) Formulate the 3 main ideas of the video.

1. Translate following word combinations into Russian.

Honey bee; process of regurgitation; primary food source; wax honeycombs; granulated sugar; attractive chemical properties; distinctive flavor; low water activity; dormant endospores; toxin-producing bacteria; essential nutrient content; potential adverse effect; excessive consumption; honey collection; physical properties; water content; specific sugars; supersaturated liquid; ambient temperature; supercooled liquid; solid granules; semisolid solution; precipitated glucose

crystals; aromatic and aliphatic acids; long-term storage; limiting access to humidity; hydrophilic properties.

2. Choose the correct definitions for the following terms.

- | | |
|--------------------|---|
| 1) nectar | a) a molecule or other molecular entity that is attracted to water molecules and tends to be dissolved by water |
| 2) regurgitation | b) not attracted to water and may seem to be repelled by it |
| 3) vaporization | c) a non-equilibrium, physical state in which a solution contains more solute than the equilibrium solubility allows, given conditions such as temperature and pressure of the system |
| 4) honeycomb | d) the simplest form of sugar and the most basic unit (monomer) from which all carbohydrates are built, Simply this is the structural unit of carbohydrates |
| 5) monosaccharide | e) also called table sugar, granulated sugar, or regular sugar, is a commonly used type of sugar, made either of beet sugar or cane sugar, which has undergone a refining process |
| 6) white sugar | f) a course that concludes a meal that consists of sweet foods, such as candy, and possibly a beverage such as dessert wine and liqueur |
| 7) dessert | g) a mass of hexagonal prismatic cells built from wax by honey bees in their nests to contain their brood (eggs, larvae, and pupae) and stores of honey and pollen |
| 8) supersaturation | h) a sugar-rich liquid produced by plants in glands called nectaries or nectarines, either within the flowers with which it attracts pollinating animals, or by extrafloral nectaries, which provide a nutrient source to animal mutualists, which in turn provide herbivore protection |
| 9) hydrophile | i) the expulsion of material from the pharynx, or esophagus, usually characterized by the presence of undigested food or blood |
| 10) hydrophobes | j) a phase transition from the liquid phase to vapor |

3. Choose the correct definitions for the following terms.

- | | |
|-----------------------|---|
| 1) chocolate | a) cow's milk from which water has been removed (roughly 60% of it) with sugar added |
| 2) cocoa bean | b) the components of cocoa beans remaining after cocoa butter, the fatty component of the bean, is extracted from chocolate liquor, roasted cocoa beans that have been ground into a liquid state |
| 3) chocolate liquor | c) a pale-yellow, edible fat extracted from the cocoa bean |
| 4) cocoa butter | d) (technically cocoa seed) is the dried and fully fermented seed of Theobroma cacao, from which cocoa solids (a mixture of nonfat substances) and cocoa butter (the fat) can be extracted |
| 5) condensed milk | e) a food made from roasted and ground cacao seed kernels that is available as a liquid, solid, or paste, either on its own or as a flavoring agent in other foods |
| 6) cocoa solids | f) pure cocoa in liquid or semi-solid form |
| 7) palmitic acid | g) a kind of paper designed product (chocolate) wrapping |
| 8) stearic acid | h) a fatty acid with a 16-carbon chain |
| 9) wrapping paper | i) effect that can occur if chocolate is stored or served improperly |
| 10) "blooming" effect | j) a saturated fatty acid with an 18-carbon chain |

Unit 8

1. Translate following words and word combinations into Russian.

Animal flesh; the advent of civilization; domestication of animals; industrial scale; to be composed of; in a variety of ways; unprocessed meat; as a result of; depending on; as well as; economic conditions; to be associated with; meat production and consumption; can be broadly classified; concentration of myoglobin; muscle fibre; to be exposed to oxygen; to depend on; fibre type; short fast bursts; adult mammal; fat content.

2. Translate following word combinations into English.

Делать возможным одомашнивание животных; использование в промышленных масштабах; в результате заражения и разложения; в зависимости от культурных и религиозных предпочтений; из-за этических и экологических соображений; подвергаться обработке для длительного сохранения; быть приготовленным многими способами.

3. Answer the questions.

1. What is meat? What is meat composed of?
2. How is meat edible?
3. Why does unprocessed meat spoil?
4. Why do vegetarians choose not to eat meat?
5. How can meat be classified?
6. What is fat content in meat depend on?
7. Does wild or farm animal's meat leaner?
8. What are the some examples how meat can be prepared?

4. Choose the correct definitions for the following terms.

- | | |
|------------------|--|
| 1) meat | a) the people and companies engaged in modern industrialized livestock agriculture for the production, packing, preservation and marketing of meat (in contrast to dairy products, wool, etc.) |
| 2) omnivorous | b) meats with a relatively low fat content |
| 3) livestock | c) animal flesh that is eaten as food |
| 4) vegetarian | d) an animal that has the ability to eat and survive on both plant and animal matter |
| 5) meat industry | e) an iron- and oxygen-binding protein found in the cardiac and skeletal muscle tissue of vertebrates in general and in almost all mammals |
| 6) consumption | f) any aggregation of soft tissues of an organism |
| 7) myoglobin | g) a combination of solid food ingredients that have been cooked in liquid and served in the resultant gravy |
| 8) lean meats | h) the domesticated animals raised in an agricultural setting in order to provide labour and produce diversified products for consumption such as meat, eggs, milk, fur, leather, and wool |

- | | |
|-----------|---|
| 9) stew | i) a person who doesn't eat meat and follows the diet or philosophy of Veganism |
| 10) flesh | j) the act of using resources to satisfy current needs and wants |

5. Find the English equivalents to the following Russian words.

- | | |
|---------------------|---|
| 1) мясо | a) flesh b) flash c) fresh |
| 2) сырой | a) row b) rough c) raw |
| 3) необработанный | a) inprocessed b) unprogressed c) unprocessed |
| 4) миоглобин | a) myoglobin b) mioglobin c) myoglobin |
| 5) вид | a) species b) spices c) special |
| 6) содержание | a) content b) context c) concern |
| 7) жареный | a) rosted b) roasted c) roused |
| 8) БЫТЬ СВЯЗАННЫМ С | a) be concerned on b) be dependent with c) be associated with |
| 9) разложение | a) decomposition b) unprocessed c) depending |
| 10) краснота | a) radish b) redness c) readiness |

6. Choose the right word or word combination, complete the sentences and prove your choice.

- Humans are _____, and have hunted and killed animals for meat since prehistoric times.
a) omnivorous b) carnivorous c) flesh-eating
- Meat is mainly composed of _____, protein, and fat, and is usually eaten together with other food.
a) minerals b) carbohydrates c) water
- Meat can be classified as "red" or "white" depending on the _____ in muscle fibre.
a) composition of myoglobin b) composition of oxymyoglobin c) concentration of myoglobin
- Red meat contains more _____ that tend to operate over long periods without rest.
a) narrow muscle fibres b) wide muscle fibre c) narrow flesh tissue
- Fresh meat can be cooked for immediate consumption, or be processed for _____ and later consumption.
a) longer-term preservation b) long-term storage c) short-term keeping
- Vegetarians choose not _____ meat.
a) to eat b) to process c) to roast
- Meat _____ in many ways, as steaks, in stews, fondue, or as dried meat.
a) is prepared b) is processed c) should be consumed
- Unprocessed meat will spoil or rot as a result of _____ bacteria.
a) infestation from and decomposition of b) infection with and decomposition by c) infection by and composition of
- _____ varies worldwide, depending on cultural or religious preferences.
a) Meat classification b) Meat consumption c) Fiber composition
- Other kinds of meat are _____, or simply boiled, roasted, or fried.
a) marinated and barbecued b) marinated and brined c) stewed and barbecued

7. Translate the following sentences into English, using a vocabulary.

- Мясо переваривается несколько медленно, но усваивается 95% мясного белка и 96% жира.
- Обычно называемая белым мясом, домашняя птица (poultry) включает курицу и индейку.
- Свинина (pork) более восприимчива к бактериальному заражению и болезням пищевого происхождения, чем другое мясо, поэтому важно обеспечить тщательное приготовление свинины.

4. Говядина является очень распространенной альтернативой свинине в регионах, где ее не употребляют в пищу по культурным или религиозным причинам.
5. Для тех, кто старается потреблять меньше жира / калорий, курица содержит их меньшее количество, чем другие виды мяса, но с таким же содержанием белка.
6. Поскольку олени в основном живут и питаются в дикой природе, в оленине гораздо меньше жира (и соотношение омега-6 к омега-3), чем в других видах мяса.
7. В оленине содержится больше витаминов и минералов, чем в говядине, несмотря на то, что в ней значительно меньше калорий.
8. Эксперты в области здравоохранения советуют употреблять говядину в умеренных количествах, так как она богата холестерином и жирами.
9. Преимущества употребления говядины в пищу заключаются в том, что она является источником железа, цинка, белков и витаминов группы В.
10. В утином мясе содержится большее количество холестерина и жиров по сравнению с куриным мясом.
11. Гусь – это разновидность домашней птицы, которая выпускается под маркой «белое мясо» и особенно популярна в Китае, Европе и на Ближнем Востоке.
12. Хотя баранина, как правило, стоит дороже других видов мяса, она также считается одним из самых полезных продуктов с хорошим содержанием питательных веществ.

8*. Watch the video «Proteins»: <https://disk.yandex.ru/i/mgwefhjNHcTllg>

- a) Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).
- b) Formulate the 3 main ideas of the video.

1. Translate following word combinations into Russian.

Marine life; most diverse group; preservation techniques; resulting taste and texture; high quality protein; essential fatty acids; aquatic invertebrates; species of mollusks, crustaceans and echinoderms; saltwater (freshwater) environment; water-dwelling animals.

2. Choose the correct definitions for the following terms.

- | | |
|----------------------------|--|
| 1) crustaceans | a) any naturally occurring liquid or frozen water containing low concentrations of dissolved salts and other total dissolved solids |
| 2) echinoderms | b) any animal, whether vertebrate or invertebrate, that lives in water for all or most of its lifetime |
| 3) salt water | c) water that contains a high concentration of dissolved salts (mainly sodium chloride) |
| 4) freshwater | d) processes that make food more resistant to microorganism growth and slow the oxidation of fats |
| 5) water-dwelling animal | e) any member of the phylum Echinodermata; recognisable by their (usually five-point) radial symmetry |
| 6) fatty acids | f) the largest marine phylum, comprising about 23% of all the named marine organisms with a body largely consisting of solid muscle, a mantle with a significant cavity used for breathing and excretion, the presence of a radula |
| 7) invertebrates | g) either the enterprise of raising or harvesting fish and other aquatic life or, more commonly, the site where such enterprise takes place |
| 8) preservation techniques | h) a carboxylic acid with an aliphatic chain, which is either saturated or unsaturated |

- | | |
|--------------|--|
| 9) fishery | i) animals that neither develop nor retain a vertebral column (commonly known as a spine or backbone), which evolved from the notochord |
| 10) mollusks | j) a large, diverse group of arthropods including decapods, seed shrimp, branchiopods, fish lice, krill, remipedes, isopods, barnacles, copepods, opossum shrimps, amphipods and mantis shrimp |

2. Choose the correct definitions for the following terms.

- | | |
|---------------------|--|
| 1) egg | a) an organic vessel grown by an animal to carry a possibly fertilized egg cell (a zygote) and to incubate from it an embryo within the egg until the embryo has become an animal fetus that can survive on its own, at which point the animal hatches |
| 2) albumen | b) a food consisting of salt-cured roe of the family Acipenseridae |
| 3) vitellus | c) an essential nutrient for humans and many other animals with the chemical formula $[(CH_3)_3NCH_2CH_2OH]^+$ |
| 4) caviar | d) a dish made from eggs (usually chicken eggs) stirred, whipped, or beaten together typically with salt, butter, oil, and sometimes other ingredients, and heated so that they form into curds |
| 5) roe | e) the nutrient-bearing portion of the egg whose primary function is to supply food for the development of the embryo |
| 6) choline | f) the clear liquid contained within an egg |
| 7) scrambled eggs | g) also known as vitamin B2, is a vitamin found in food and sold as a dietary supplement |
| 8) riboflavin | h) the fully ripe internal egg masses in the ovaries, or the released external egg masses, of fish and certain marine animals |
| 9) pantothenic acid | i) a B5 vitamin and an essential nutrient |
| 10) Salmonellosis | j) a symptomatic infection caused by bacteria of the Salmonella type |

Unit 9

1. Translate following words and word combinations into Russian.

In addition to; soft drink; carbonated drink; referring to; drink containing ethanol; non-alcoholic beverage; an alcohol removal process; de-alcoholized wine; pasteurization methods; application of solvents; liquid extract; electric juicer; commercial juice; high-pulp fresh juice; spray drying; processing methods; juice extraction; hydrogen peroxide.

2. Translate following word combinations into English.

Включать множество других соединений; стать популярным выбором напитков; готовиться путем отжима или мацерации; фильтровать для удаления волокон или мякоти; удалять кожуру; повторно восстановить для использования позже; подвергать растиранию; извлекать сок; увеличивать срок годности; концентрировать путем нагревания под вакуумом (для удаления воды); возвращать утраченный вкус; требовать стерильных условий; разливать в контейнер.

3. Answer the questions.

1. What is a beverage?
2. Is water classified as a beverage?
3. Where is juice naturally contained?
4. Did juice emerge as a popular beverage choice?
5. Why are commercial juices filtered?

4. Choose the correct definitions for the following terms.

- | | |
|------------------------|---|
| 1) soft drink | a) a substance made by extracting a part of a raw material, often by using a solvent such as ethanol, oil or water |
| 2) carbonated drinks | b) a version of a drink made without alcohol, or with the alcohol removed or reduced to almost zero |
| 3) non-alcoholic drink | c) a type of vaporization that occurs on the surface of a liquid as it changes into the gas phase |
| 4) extract | d) a drink made from the extraction or pressing of the natural liquid contained in fruit and vegetables |
| 5) juice | e) beverages that consist mainly of carbonated water |
| 6) beverage | f) a soft moist shapeless mass of fruit |
| 7) liquid | g) a liquid intended for human consumption |
| 8) pulp | h) any water-based flavored drink, usually but not necessarily carbonated, and typically including added sweetener |
| 9) filtration | i) the state of matter in which a substance exhibits a characteristic readiness to flow and little or no tendency to disperse, and is amorphous but has a fixed volume and is difficult to compress |
| 10) evaporation | j) a physical separation process that separates solid matter and fluid from a mixture using a filter medium that has a complex structure through which only the fluid can pass |

5. Find the English equivalents to the following Russian words.

- | | |
|---------------------|--|
| 1) напиток | a) beverage b) juice c) liquid |
| 2) жидкость | a) liquor b) liquid c) liqueur |
| 3) пастеризация | a) pasteurization b) preservation c) fermentation |
| 4) выпаривание | a) preservation b) processing c) evaporation |
| 5) извлечение | a) extraction b) squeezing c) removing |
| 6) газированный | a) carbohydrate b) consumption c) carbonated |
| 7) срок годности | a) inspiration day b) expiration date c) extraction period |
| 8) фильтрация | a) removal b) filling c) filtration |
| 9) разбавитель | a) pulp b) solvent c) reamer |
| 10) восстанавливать | a) to reclaim b) to reconstitute c) to blend |

6. Choose the right word or word combination, complete the sentences and prove your choice.

1. Juice is prepared by mechanically _____ or macerating fruit or vegetable flesh without the application of heat or solvents.
a) concentrating b) pressing c) squeezing
2. Many commercial juices are filtered to remove _____.
a) fiber or pulp b) flesh and pulp c) fiber and alcohol

3. After the fruits are picked and washed, the juice is _____ by one of two automated methods.
a) extracted b) reconstituted c) evaporated
4. Juices can also be sold in a _____ state, in which the consumer adds water to the concentrated juice as preparation.
a) condensed b) concentrated c) carbonated
5. Chemicals such as _____ can be used to sterilize containers.
a) hydrogen peroxide b) Hydrogen oxide c) dehydrogen monoxide
6. After the juice _____, it may be concentrated, which reduces the size of juice.
a) is filled b) is filtered c) was squeezed
7. A drink or _____ is a liquid intended for human consumption.
a) beverage b) brew c) juice
8. _____ that cannot stand heat require sterile conditions for filling.
a) Pasteurization b) Beverages c) Packages
9. Juices are concentrated by _____ under a vacuum to remove water.
a) heating b) concentrating c) sterilizing
10. Common methods for preservation and processing of fruit juices include _____, concentrating, freezing, evaporation and spray drying.
a) canning, filtration b) conservation, pasteurization c) canning, pasteurization

7. Translate the following sentences into English, using a vocabulary.

1. Термин «напиток» используется для определения всех типов пригодных для питья жидкостей, которые потребляют люди.
2. Самая важная функция напитка – поддерживать в нас влагу и снабжать питательными веществами.
3. Безалкогольными называют напитки, не вызывающие опьянения, или сладкие газированные напитки, в которых нет процентного содержания алкоголя, или, другими словами, дрожжи не вводятся для превращения сахара в алкоголь в процессе брожения.
4. Соки могут быть полезным выбором для потребителей, потому что большинство фруктовых и овощных соков богаты необходимыми организму витаминами и минералами.
5. Смузи – это смесь фруктов и овощей, фруктового сока, овощного пюре, молока или даже йогурта.
6. Сахар является одним из основных ингредиентов в безалкогольных напитках, на долю которого приходится 7-12% объема бутылки напитка.
7. Углекислый газ придает газировке игристость и действует как мягкий консервант.
8. Чистота воды оказывает значительное влияние на качество разливаемого напитка.
9. Первое правило при производстве напитков - проверять сырье, прежде чем смешивать его с другими ингредиентами.
10. Вино - это алкогольный напиток, получаемый путем частичного или полного брожения винограда.
11. Напиток из овощного сока: относится к продукту, который можно употреблять непосредственно, добавив воду, жидкий сахар, кисломолочный продукт и т. д. к овощному соку, а овощной сокосодержащий напиток, содержащий два или более видов овощного сока, называется смешанным овощным сокосодержащим напитком.
12. Питьевая вода, расфасованная в пластиковые бутылки, стеклянные бутылки или другие емкости без каких-либо добавок для непосредственного употребления, включает питьевую природную минеральную воду, питьевую чистую воду и другую питьевую воду.

8*. Watch the video «Hydration»: <https://disk.yandex.ru/i/EECZqVZLOfRt5A>

- a) *Pay attention to the pronunciation of the terms mentioned in the lesson (vocabulary).*
- b) *Formulate the 3 main ideas of the video.*

1. Translate following word combinations into Russian.

Boiling water; cured leaves; evergreen shrub; most widely consumed drink; slightly bitter and astringent flavour; recreational drink; large-scale production and commercialization; intermediate hybrids; spontaneous polyploids; medicinal purposes; concentrated liquid; stimulating drink; medicinal concoction; enzymatic oxydation process; plant's intracellular enzymes; predetermined stage; careful moisture and temperature control; undesired molds; unfit for consumption.

2. Choose the correct definitions for the following terms.

- | | |
|-------------------------|---|
| 1) tea | a) to reach, or cause something to reach, the temperature at which a liquid starts to turn into a gas |
| 2) shrub | b) the offspring resulting from combining the qualities of two organisms of different varieties, species or genera through sexual reproduction |
| 3) flavour | c) a traditional semi-oxidized Chinese tea produced through a process including withering the plant under strong sun and oxidation before curling and twisting |
| 4) hybrid | d) either the sensory perception of taste or smell, or a flavoring in food that produces such perception |
| 5) to boil | e) to take some things and leave others |
| 6) an evergreen | f) an aromatic beverage commonly prepared by pouring hot or boiling water over cured leaves of the <i>Camellia sinensis</i> , an evergreen shrub native to Asia |
| 7) herbal teas | g) (often also called a bush) a small-to-medium-sized perennial woody plant |
| 8) oolong | h) a plant which has foliage that remains green and functional through more than one growing season |
| 9) to pick | i) a process in which change of temperature of a space (and objects collectively there within), or of a substance, is measured or otherwise detected, and the passage of heat energy into or out of the space or substance is adjusted to achieve a desired temperature |
| 10) temperature control | j) beverages made from the infusion or decoction of herbs, spices, or other plant material in hot water |

3. Choose the correct definitions for the following terms.

- | | |
|-----------------|--|
| 1) coffee bean | a) a cooking appliance used to brew coffee |
| 2) Arabica | b) in the United States and elsewhere is a short mid-morning rest period granted to employees in business and industry |
| 3) Robusta | c) a beverage prepared from roasted coffee beans |
| 4) caffeine | d) a fruit from the <i>Coffea</i> plant and the source for coffee |
| 5) niacin | e) an alkaloid present in certain plants, such as coffee and tea |
| 6) coffee | f) a coffee beverage served cold |
| 7) coffee maker | g) <i>Coffea robusta</i> , or commonly robusta coffee) is a species of coffee that has its origins in central and western sub-Saharan Africa |
| 8) coffee break | h) something which shows that something else exists or is true |
| 9) iced coffee | i) also known as nicotinic acid, is an organic compound and a vitamer of vitamin B3, an essential human nutrient |

- 10) evidence j) also known as the Arabic coffee, is a species of flowering plant in the coffee and madder family Rubiaceae

Topic About Myself

Compose your own topic according to the topic's constructor. Tell about your past, present and future. Use introduction words. From the very beginning speak on the topic in general.

1. Introduction (begin with one of these variants or compose your own one):

- a) Throughout the world, there are many different types of people who have different personalities. A person's personality is what makes them different from each other and makes them unique from the crowd. That's why it is important to be able to define the characters as one's own.
- b) From the very start I should say that it is not an easy thing to speak about myself as it is hard to have a look at yourself from aside, but at the same time who knows you better than you yourself do?

2. Your present:

Tell general information about yourself, the place where you live, your family, your education, your hobbies and interests, your character etc.

Use Present Simple Tense. Remember about using the introduction words.

- 1. Let me introduce myself ./Let me tell you a few words about myself./Let me tell you a couple of words about myself.
- 2. My name is...
- 3. I am ...years old.
- 4. I am from... /I was born in Moscow and I have lived there all my life. /I was born in It is a small town near... /I used to live in..., but now I live in ...
- 5. I come from a small/ large family. There are *four* of us in the family.
- 6. All members of my family are friendly and helpful. We get on well with each other.
- 7. I study at University. My favourite subjects are... . I am good at English.
- 8. I am fond of ... /I am interested in ... /I am keen on ... /I can *ski* very well./ In my free time I usually... .
- 9. People who know me well, say that I am a reliable person. I am a communicative person and I have a lot of friends. My best qualities are patience and creativity. But sometimes I can be lazy.

3. Your Past:

Tell about your education and achievements. Use Past Simple Tense for your usual life and Present Perfect Tense to speak about an action that occurred in the past, but has a result in the present (now).

1. I was...
2. I used to be...
3. I *did*...
4. I have *done*...

4. Your Future:

Tell about your plans, dreams and goals for the future. Use Present Simple Tense, Future Simple Tense, Present Continuous Tense.

1. In future I want to be a ...
2. I want to become a ...
3. I dream of (V_{ing})...
4. My dream is to...
5. I wish to...
6. I would like to...
7. I will...

5. Ending:

Finish your story and thank for the attention.

Example: That's all about myself. Thank you for your attention.

Revision to Part III

STEP 1.

Unit 7.

Choose any vegetable product (or a group of similar products) that has a sweet taste. Specify:

- what substance provides a sweet taste (chemical formula, name);
- how will the taste of this product change with different types of processing (specify at least two – cooking, drying, smoking, etc.), specify the reason;
- application (specify at least five dishes using this product).

Present the data in the form of a report with a presentation.

Unit 8.

Choose any type of meat, fish or eggs that are atypical for Russian traditional cuisine and tell us about the way they are cooked and eaten. Specify:

- type of meat (fish, eggs);
- the country in which this product is eaten;
- chemical qualitative and quantitative composition and nutritional value;

- cooking method;
 - taste qualities;
 - types of dishes that include this ingredient.
- Present the data in the form of a report with a presentation.

Unit 9.

Choose any national drink and tell us about it. Specify:

- raw materials;
- necessary equipment;
- cooking time;
- cooking conditions (temperature, pressure, etc.);
- chemical qualitative and quantitative composition of the finished product;
- external and taste qualities of the finished product;
- conditions and terms of storage of the finished product.

Present the data in the form of a report with a presentation.

*Create your presentation for one of the following topics and deliver a speech to your group mates:
(Use the recommendations <https://disk.yandex.ru/i/s6UjxcwiBig-xw>).*

STEP 2.

Think of some recommendations (advices) and make a written report about your opinion and give some facts if it possible.

4 Список рекомендуемой литературы

Основные источники:

1. Английский язык. Экология, почвоведение и природопользование : учебное пособие для среднего профессионального образования / О. А. Егорова, О. Н. Козлова, Е. Э. Кожарская ; ответственный редактор Л. В. Полубиченко. — Москва : Издательство Юрайт, 2024. — 112 с. — (Профессиональное образование). — ISBN 978-5-534-08000-1. — Текст : электронный // Образовательная платформа Юрайт [сайт]. — URL: <https://urait.ru/bcode/539015> (дата обращения: 17.01.2025).

Дополнительные источники:

1. Иванова О.Ф. Английский язык. Пособие для самостоятельной работы учащихся (B1 — B2) : учебное пособие для спо / О. Ф. Иванова, М. М. Шиловская. - Москва : Юрайт, 2022. - 352 с. - (Профессиональное образование). - URL: <https://urait.ru/bcode/494740>. - ISBN 978-5-534-09663-7 : 1379.00. <https://urait.ru/bcode/494740>.

2. Филиппова О.В. Английский язык в профессиональной деятельности: учебное пособие для обучающихся по специальности 19.02.11 Технология продуктов питания из растительного сырья / Санкт-Петербург, 2024.

3. Филиппова О.В. Английский язык. Рабочая тетрадь для обучающихся по направлению подготовки 19.02.11 Технология продуктов питания из растительного сырья / Санкт-Петербург, 2024.