

МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА
И ПРОДОВОЛЬСТВИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

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АНГЛИЙСКИЙ ЯЗЫК.

СЕЛЬСКОХОЗЯЙСТВЕННАЯ ТЕХНИКА

*Учебно-методическое пособие
для студентов группы специальностей 74 06 Агроинженерия*

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В учебно-методическое пособие включены оригинальные тексты, сопровождающиеся серией предтекстовых, текстовых и послетекстовых упражнений по трем уровням сложности.

Тематика и объем дополнительных текстов обеспечивают выработку навыков самостоятельной работы с профессионально-ориентированными текстами на английском языке.

**УДК 811.111(075.8)
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ТЕМА «FARM MACHINERY»

Содержание текстов имеет своей целью дальнейшее знакомство студентов с языком будущей специальности в соответствии с реально существующими направлениями агроинженерии, включающей такие сферы как ремонтно-техническое обслуживание в сельском хозяйстве, материально-техническое обеспечение процессов производства и переработки, охрана труда на предприятиях агропромышленного комплекса, сельскохозяйственное машиностроение, технология производства и переработки сельскохозяйственной продукции. Грамматические темы выделены на основе частотности их употребления в оригинальной литературе. Представлены все виды обучения чтению, что позволит студентам освоить различные тактики и стратегии переработки текстовой информации.

В результате изучения темы студент должен:

• **знать:**

1 уровень (А): 1) лексический материал по теме «Farm Machinery»; 2) а) понятие инфинитива, его признаки, формы инфинитива в действительном и страдательном залоге, функции в предложении (The Infinitive), б) объектный инфинитивный (The Complex Object) и причастный оборот (The Objective with the Participle), в) субъектный инфинитивный (The Complex Subject) и причастный оборот (The Subjective with the Participle), г) абсолютный причастный оборот (The Absolute Participial Construction), д) герундиальный оборот (The Gerundial Complex).

Максимальная оценка знаний на 1 уровне (репродуктивном) – 6 баллов.

2 уровень (В): знать и характеризовать: 1) лексический материал по теме «Farm Machinery»; 2) а) признаки инфинитива, формы инфинитива в действительном и страдательном залоге, функции инфинитива (The Infinitive), б) объектный инфинитивный (The Complex Object) и причастный оборот (The Objective with the Participle), в) субъектный инфинитивный (The Complex Subject) и причастный оборот (The Subjective with the Participle), г) абсолютный причастный оборот (The Absolute Participial Construction), д) герундиальный оборот (The Gerundial Complex)..

Максимальная оценка знаний на 2 уровне (продуктивном) – 8 баллов.

3 уровень (C): знать, характеризовать и анализировать: 1) лексический материал по теме « Farm Machinery»; 2) а) формы инфинитива в действительном и страдательном залоге в различных функциях в предложении (The Infinitive), б) объектный инфинитивный (The Complex Object) и причастный оборот (The Objective with the Participle), в) субъектный инфинитивный (The Complex Subject) и причастный оборот (The Subjective with the Participial), г) абсолютный причастный оборот (The Absolute Participial Construction), д) герундиальный оборот в предложениях и речевых высказываниях (The Gerundial Complex).

Максимальная оценка знаний на 3 уровне (творческом) – 10 баллов.

• **уметь:**

1 уровень (A): 1) анализировать иноязычный текст (его структурные, лексические и стилистические особенности) с позиций требований к знаниям 1-го уровня; 2) читать, переводить, понимать на слух тексты по профилю обучения; 3) вести общение профессионального и социокультурного характера на английском языке **по предложенной модели**, сочетая диалогические и монологические формы речи; 4) понимать иноязычную *речь в объеме программной тематики*; 5) использовать английский язык в качестве инструмента профессиональной деятельности: перевод на русский язык, реферирование профессионально ориентированных текстов.

Максимальная оценка знаний на 1 уровне (репродуктивном) – 6 баллов.

2 уровень (B): 1) анализировать иноязычный текст (его структурные, лексические и стилистические особенности) с позиций требований к знаниям 2-го уровня; 2) читать, переводить, понимать на слух тексты по профилю обучения; 3) вести общение профессионального и социокультурного характера на английском языке **в различных стандартных ситуациях**, пользуясь правилами речевого этикета, сочетая диалогические и монологические формы речи; 4) понимать иноязычную *речь в объеме программной тематики*; 5) использовать английский язык в качестве инструмента профессиональной деятельности: перевод на русский язык, реферирование, аннотации, составление тезисов, профессионально ориентированных текстов.

Максимальная оценка знаний на 2 уровне (продуктивном) – 8 баллов.

3 уровень (C): 1) анализировать иноязычный текст (его структурные, лексические и стилистические особенности) с позиций требований к знаниям 3-го уровня; 2) читать, переводить, понимать на слух тексты по профилю обучения; 3) вести общение профессионального и социокультурного характера на английском языке **в различных нестандартных ситуациях**, пользуясь правилами речевого этикета сочетая диалогические и монологические формы речи; 4) понимать иноязычную *речь сверх программной тематики*; 5) использовать английский язык в качестве инструмента профессиональной деятельности: перевод на русский язык, реферирование, составление тезисов, аннотаций, резюме аутентичных профессионально ориентированных и научных текстов.

Максимальная оценка знаний на 3 уровне (творческом) – 10 баллов.

1 НАУЧНО-ТЕОРЕТИЧЕСКОЕ СОДЕРЖАНИЕ ТЕМЫ

Инфинитив, формы инфинитива в действительном и страдательном залоге, функции инфинитива в предложении.

1) *Инфинитив* – это неопределенная форма глагола, отвечающая на вопрос что делать? что сделать? Формальным признаком инфинитива является частица *to*, которая может отсутствовать после некоторых глаголов.

!!! Запомните: инфинитив употребляется без частицы *to* после глаголов, выражающих:

| | |
|--|---|
| 1. Чувства и эмоции, физическое восприятие, ощущение: to see, to hear, to feel, to watch, to notice, to observe | We see the student do this work. Мы видим, что студент выполняет эту работу. |
| 2. Приказ, разрешение, побуждение: to make, to let, to cause, to have (распорядиться) | He made the mechanic repair the car. Он заставил механика починить машину. |

Формы инфинитива

| Группа времен | Действительный залог | Страдательный залог |
|---------------------|--|---|
| Simple (Indefinite) | <i>to use</i> He wants <i>to use</i> the new machinery. Он хочет использовать новую технику. | <i>to be used</i> The machinery <i>to be used</i> is new. Техника, которая будет использоваться, новая. |
| Continuous | <i>to be using</i> The new machinery seems <i>to be using</i> now. Кажется, что новая техника используется сейчас. | — |
| Perfect | <i>to have used</i> He seems <i>to have used</i> the new machinery this year. Кажется, он использовал новую технику в этом году. | <i>to have been used</i> The new machinery seems <i>to have been used</i> this year. |

| | | |
|--------------------|---|--|
| | | Новая техника, кажется, использовалась в этом году |
| Perfect Continuous | <i>to have been using</i> He seems <i>to have been using</i> the new machinery for 2 years. Кажется, он использовал новую технику в течение двух лет. | — |

Функции инфинитива в предложении

| Функция | Перевод |
|--|---|
| 1. Подлежащее (subject) <i>To use</i> the new machinery is necessary. | <i>Использовать</i> новую технику (использование новой техники) необходимо. |
| 2. Часть составного сказуемого (predicative) His aim is <i>to enter</i> the Belarusian State Agrarian Technical University. | Его цель – <i>поступить</i> в Белорусский государственный аграрный технический университет. |
| 3. Дополнение (object) He is ready <i>to read</i> the text. | Он готов <i>читать</i> текст. |
| 4. Определение (attribute) The film <i>to be discussed</i> is very interesting. | Фильм, который <i>будет обсуждаться</i> , очень интересный. |
| 5. Обстоятельство (adverbial) He came here <i>to study</i> driving a car. | Он приехал сюда, чтобы <i>научиться</i> водить машину. |

Инфинитивные обороты: Complex Object, Complex Subject

Объектный предикативный инфинитивный оборот (Complex Object)



He wants *the mechanic (him)* to repair the car.

Он хочет, чтобы механик (он) починил машину.

Объектный предикативный инфинитивный оборот употребляется после глаголов, выражающих:

| | |
|--|---|
| 1. Желание, потребность: to want, to wish, to desire, to like, to intend, would like, need, to dislike, to hate | We <i>want</i> him to repair the car. Мы хотим, чтобы он починил машину. |
| 2. Умственную деятельность: to expect, to prove, to know, to think, to find, to understand, to consider, to believe, to suppose | We <i>think</i> the new machinery to be used on the farm. Мы считаем, что новая техника будет использоваться на ферме. |
| 3. Чувства и эмоции, физическое восприятие, ощущение: to see, to hear, to feel, to watch, to notice, to observe | We <i>see</i> the new machinery be used on the farm. Мы видим, что новая техника используется на ферме. |
| 4. Приказ, разрешение, побуждение: to make, to let, to permit, to ask, to tell, to order, to command, to cause, to force, to have (распорядиться) | He <i>made</i> the mechanic repair the car. Он заставил механика починить машину. |

!!! Инфинитив в объектном инфинитивном обороте часто используется в страдательном залоге, в особенности с глаголами, выражающими приказ, разрешение, побуждение:

На русский язык предложения со страдательным залогом могут переводиться с использованием действительного залога, который ставится перед существительным.

He wants the new machinery *to be used*.
Он хочет *использовать* новую технику.

Субъектный предикативный инфинитивный оборот (Complex Subject)



The new machinery (it) is known to be of good quality.

Известно, что новая техника (она) хорошего качества.

Субъектный предикативный инфинитивный оборот употребляется после глаголов и выражений:

| Выражения | Глаголы в действительном залоге | Глаголы в страдательном залоге |
|-----------------------------|---------------------------------|--------------------------------|
| to be likely-вероятно | to seem- казаться | to say- говорить |
| to be unlikely-маловероятно | to appear- оказываться | to know- знать |
| to be sure- обязательно | to happen- случаться | to think- думать |
| to be certain- определенно | to prove- оказываться | to report- считать |
| | | to suppose- предполагать |
| | | to expect- ожидать |
| | | to consider- считать |
| | | to believe - верить, полагать |
| | | to state- утверждать |
| | | to see- видеть |

!!! Инфинитив в субъектном предикативном инфинитивном обороте может употребляться во всех группах времен и формах залогов и обозначать:

| | |
|---|---|
| 1) действие, происходящее одновременно с главным | He <i>is said to use</i> the new machinery. Говорят, что он <i>использует</i> новую технику. |
| 2) действие в процессе его совершения | The house <i>seems to be building</i> now. Кажется, что дом <i>строится сейчас</i> . |
| 3) действие, предшествующее действию, выраженному сказуемым | He <i>seems to have done</i> the report this year. Кажется, что он <i>делал</i> отчет в этом году. |

!!! Инфинитив в субъектном предикативном инфинитивном обороте не может обозначать действие в будущем, кроме следующих глаголов:

To expect, to be sure, to be certain, to be likely.

He *is expected to use* the new machinery.

Ожидают, что он будет использовать новую технику.

!!! При переводе предложений, содержащих инфинитив в субъектном предикативном инфинитивном обороте, всегда начинайте переводить предложение со сказуемого:

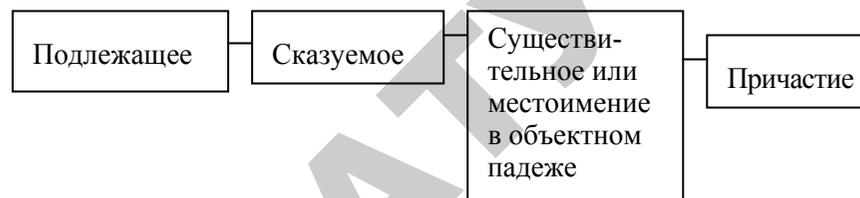
He *is said* to use the new machinery.

Говорят, что он использует новую технику.

Причастные обороты: Objective with the Participle, Subjective with the Participle, the Absolute Participial Construction.

Объектный причастный оборот с причастием настоящего и прошедшего времени The Objective Participial Construction.

Данная конструкция похожа на конструкцию *Complex Object* с инфинитивом, но здесь вместо инфинитива употребляется причастие настоящего либо прошедшего времени (*Participle I* либо *Participle II*)



I saw the farmer (him) using the new machinery.

Я видел, как фермер (он) использовал новую технику.

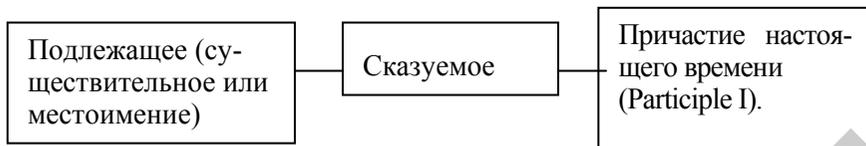
Объектный причастный оборот употребляется после глаголов, выражающих:

| Глаголы, после которых употребляется причастный оборот | Форма причастия | Примеры | Особенности |
|--|-----------------------------|---|--|
| 1. Глаголы чувственного восприятия: to hear, to see, to feel, to watch, to observe, to notice, to find | Participle I, Participle II | <i>I saw the farmer using</i> the new machinery. Я видел, как фермер <i>использовал</i> новую технику. <i>I saw the new machinery used</i> on the farm. Я видел, как новая техника <i>использовалась</i> на ферме. | Participle I показывает, что действие пассивно, Participle II показывает действие в процессе |
| 2. Глаголы умственной деятельности: to consider, to understand | Participle II | <i>I consider</i> these parts repaired. Я считаю, что эти части <i>отремонтированы</i> . | Значение пассивно |
| | | | |

| | | | |
|---|---------------|--|---|
| 3. Глаголы желания: to want, to wish, to desire | Participle II | I <i>want</i> the computers supplied. Я хочу, чтобы компьютеры <i>поставили</i> . | Значение пассивно |
| 4. Глаголы : to have, to get | Participle II | We <i>have</i> the work <i>done</i> . <i>Нам сделали</i> эту работу. | Эта конструкция употребляется, когда мы хотим сказать, что кто-то другой что-то делает (сделал) для нас |

Субъектный причастный оборот с причастием настоящего времени (The Subjective Participial Construction).

Данная конструкция состоит из:



The mechanic (he) was seen repairing the car.

Было видно, как механик(он) чинит машину.

Субъектный причастный оборот употребляется с глаголами чувственного восприятия в страдательном залоге.

Независимый причастный оборот (The Nominative Absolute Participial Construction)

Данный причастный оборот имеет *свое собственное подлежащее*, отличное от подлежащего всего предложения.

Конструкция состоит из:



My friend (he) works on the farm, his father working here too.
Мой друг (он) работает на ферме, и его отец тоже работает там.

Независимый причастный оборот отделяется от остальной части предложения **запятой**. Он может переводиться:

- 1) либо придаточным предложением с союзами *так как, поскольку, когда, после того как, если* (если он стоит в начале предложения),
- 2) либо самостоятельным предложением с союзами *а, причем, при этом* (если он стоит в конце предложения).

| | |
|--|--|
| С причастием настоящего времени Participle I | Many crops are grown by this farm, wheat <i>being</i> the most important. Многие культуры выращиваются на этой ферме, <i>причем</i> пшеница является наиболее важной. |
| С причастием прошедшего времени Participle II | <i>The car repaired</i> , the mechanic went home. <i>После того</i> , как машина была починена, механик ушел домой. |

Герундиальный оборот

Сложный герундиальный оборот (The Gerundial Complex)

Данный оборот состоит из *именной части*, выраженной существительным (или неопределенным местоимением в притяжательном падеже, или притяжательным местоимением) и *глагольной части*, выраженной герундием.

Комплексы с герундиальным оборотом могут быть теми же членами предложения, что и герундий.

Предложения с герундиальным оборотом порождаются из простых предложений, одно из которых становится как бы матричным предложением, а второе сворачивается в герундиальный оборот и вставляется в матричное предложение.

You are working on the farm. It helps you to get more practice.
Your working on the farm helps you to get more practice.

То, что ты работаешь на ферме, помогает тебе приобрести больше практики.

| Функции в предложении | Модели | Примеры |
|--|--|---|
| 1. Сложное подлежащее | 1. a) It is (was) no use (useless, no good) smb's doing smth. в) smb's doing smth, will do smth, would do smth). | 1.a) It is useless <i>his working</i> so late. Ему бесполезно так поздно работать. b) <i>Your working</i> on the farm helps you to get more practice. То, что ты работаешь на ферме, помогает тебе приобрести больше практики. |
| 2. Часть составного сказуемого | 2. to be for (against) smb's doing smth. | 2. I am against <i>your working</i> on the farm. Я против того, чтобы ты работал на ферме. |
| 3. Сложное дополнение (прямое и косвенное с предлогом) | 3. a) (can) avoid (afford, stand, help, prevent) smb's doing smth b) to mind (like, love, hate) smb's doing smth c) to be afraid of (to object to, to insist on, to depend on, to be grateful for...) smb's doing smth. | a) I can not help <i>his repairing</i> the car. Я не могу помочь ему починить машину. b) Do you like <i>his working</i> on the farm? Вам нравится, как он работает на ферме? c) I insisted on <i>his working</i> on the farm. Я настоял на том, чтобы он работал на ферме. |

| | | |
|---------------------------|--|---|
| 4. Сложное определение | 4. a) plan (idea, point, sense, purpose, good, harm, mistake, difficulty, opportunity of smb's doing smth. b) there is (smb sees no (little) harm (good, sense, point, difficulty) in smb doing smth. | a) Everyone liked the idea of <i>his working</i> on the farm. Всем понравилась идея, что он будет работать на ферме. b) There is no sense in <i>your working</i> on this farm. Тебе нет смысла работать на этой ферме. |
| 5. Сложное обстоятельство | 5. on (after, before, by, through, because of, without) smb's doing smth. | I worked on the farm before <i>my getting</i> this job. Я проработал на ферме до того, как получил эту работу. |

Задания для самоконтроля

- 1) Какие неличные формы глагола вы знаете? Для образования каких временных групп они уже употреблялись?
- 2) Дайте описание инфинитива как одной из неличных форм глагола.
- 3) Назовите формы инфинитива действительного залога всех групп времен, образованные от следующих глаголов русского языка: *пахать, удобрять, дисковать, бороновать, убирать урожай, улучшать, сеять, сажать*. При необходимости, обращайтесь к таблице форм инфинитива и активному словарю модуля.
- 4) Назовите формы инфинитива страдательного залога всех групп времен, образованные от следующих глаголов русского языка: *пахать, удобрять, дисковать, бороновать, убирать урожай, улучшать, сеять, сажать*. При необходимости, обращайтесь к таблице форм инфинитива.
- 5) Какие функции инфинитив выполняет в данных предложениях:
 - a) To prepare the soil is very important.
 - b) He began to harvest.
 - c) He went to London to take part in the exhibition of farm machinery.
 - d) He was the first to plant potatoes.
 - e) We are ready to seed crops.
- 6) Какие инфинитивные обороты вы знаете? Чем они похожи и чем отличаются?
- 7) Определите, к какой группе инфинитивных оборотов относятся следующие предложения, и объясните почему.
 - a) We know granular fertilizers are used to improve the physical conditions of the soil.
 - b) Granular fertilizers are known to improve the physical conditions of the soil.
- 8) Какие виды причастных оборотов вы знаете? В чем они схожи с инфинитивными оборотами? Чем отличаются? Определите, содержат ли данные предложения причастные обороты. Какие виды причастных оборотов они содержат?
 - a) I saw him demonstrating a new device.
 - b) He was seen demonstrating a new device.
 - c) We saw him demonstrate a new device.
 - d) A new device demonstrated, he started to speak about other machinery.
- 9) Из чего состоит герундиальный оборот? Чем он отличается от причастных оборотов? Прочитайте данное предложение, содержащее герундиальный оборот и переведите его на русский язык.
We liked the idea of his speaking about some new machinery.

2 МАТЕРИАЛЫ К ПРАКТИЧЕСКИМ ЗАНЯТИЯМ

Текст А «FARM MACHINERY»

ACTIVE VOCABULARY

Verbs

| | |
|---|---|
| apply fertilizers | вносить удобрения в почву |
| break (broke, broken) up the layers of soil | разбивать на мелкие куски пахотный горизонт |
| break down the soil | рыхлить почву |
| compact | утрамбовывать |
| crush the clods | дробить глыбы, комья земли |
| cover seeds | закрывать семена в почве |
| consolidate the soil | трамбовать, уплотнять почву |
| destroy (syn. eliminate) weeds | удалять сорняки |
| disk | дисковать почву |
| fertilize the soil | удобрять почву |
| fallow | вспахивать под пар |
| harrow | бороновать почву |
| hoe out the weeds | пропалывать между рядами |
| level the ground | выравнивать почву |
| mulch | мульчировать |
| plant | сажать |
| prevent weeds | предотвращать сорняки |
| prepare seedbed | готовить семенное ложе |
| penetrate | проникать |
| pull | тянуть, тащить |
| stir the soil | рыхлить почву |
| sow (saw, sown) seeds (syn. place) | сеять семена |
| transmit | передавать |

Nouns

| | |
|--------------------|---------------------------------|
| barnyard manure | навоз |
| beet cultivator | свекловичный культиватор |
| bean cultivator | культиватор для бобовых культур |
| broad-cast planter | сеялка для пропашных культур |

| | |
|---|--|
| baler | пресс-подборщик, сенной пресс |
| beet harvester | машина для уборки свеклы |
| cultivation machinery (syn. cultivator) | культиваторы |
| chisel cultivator | чизель-культиватор |
| combine harvester | зерноуборочный комбайн |
| components | деталь |
| disc plow | дисковый плуг |
| disk harrow | дисковая борона |
| digger | копатель |
| disc coulter | дисковый нож |
| farm machinery | сельскохозяйственная техника |
| fertilizing equipment | машины для внесения удобрений |
| field cultivator | культиватор для обработки паров |
| fertilizer distributor | туковая сеялка |
| frame | рама |
| granular fertilizer | гранулированное удобрение |
| grain drill | зерновая сеялка |
| harvesting equipment | уборочные машины |
| harrow | борона |
| heavy machinery | тяжелая техника |
| headstock | присоединительная стойка навесного орудия |
| lister cultivator | культиватор для бороздовых посевов |
| moldboard | отвал |
| manure spreader | навозоразбрасыватель |
| moldboard plow | отвальный плуг |
| motion | движение |
| mounted plow | навесной плуг |
| mower | косилка |
| planting attachments | установки, крепления для посева |
| power operate device | автоматическое устройство |
| primary tillage equipment | почвообрабатывающие орудия для первичной обработки |

| | |
|-------------------------------------|--|
| planting equipment | посевные машины |
| potato harvester | картофелеуборочный комбайн |
| rotary hoe | ротационная мотыга |
| rod weeder | штанговый культиватор |
| roller | каток, валец, валик, ролик |
| row-crop planter | широкорядная сеялка |
| rake | грабли |
| semi mounted plow | полунавесной плуг |
| sub- soiler | почвоуглубитель, глубокорыхлитель (без оборота пласта) |
| spike tooth harrow | зубовая борона |
| spring tooth harrow | пружинная борона |
| secondary tillage equipment | почвообрабатывающие орудия для последующей обработки |
| sprayer | опрыскиватель |
| share | лемех, сошник |
| skim coulter | предплужник, дерносниг |
| tillage | обработка почвы |
| tools for mulching and fallowing | орудия для мульчирования и вспахивания под пар |
| thinner | прореживатель |
| track- laying tractor (syn. crawler | гусеничный трактор |
| wheeled tractor | колесный трактор |

ТЕКСТ А: «FARM MACHINERY»

Answer the following questions:

What specialized subjects connected with your future profession do you study at the university? Are they necessary for your future work? What must be said about the importance of farm machinery on a modern farm? A great variety of farm machinery is used on the farm, isn't it?

Read the text and say why agriculture needs many kinds of farm machinery.

1. We know the farmer to have a wide range of machinery to plow and disk, and harrow, and plant, and fertilize, and finally harvest faster, easier and more profitably today. The machine is known to be a device that

uses force to accomplish something transmitting and changing force or motion into work.

2. Agricultural implements and machines being very numerous and diversified now may be divided into 4 main groups: tillage equipment, planting equipment, fertilizing equipment, harvesting equipment.

3. The aim of tillage is to prepare the soil for planting and to keep it loose and free from weeds during the growth of crops. The **primary tillage equipment** used by the farmer includes ploughs, sub-soilers, and thinners. The **secondary tillage equipment** embraces harrows, rollers and tools for mulching and fallowing. Plow is designed to eliminate weeds, to prepare a suitable seedbed, to improve the physical condition of the soil. Ploughs fall into mounted, semi mounted, disc, moldboard plows. The main components of ploughs are the main frame, the share, the moldboard, the disc coulter, the skim coulter, the headstock. The function of sub-soiler is to penetrate into the deeper depths and break up the layers of soil which have become compacted due to the movement of heavy machinery. A harrow is an implement used to level the ground and crush the clods, to stir the soil, and to prevent and destroy weeds. There are three principal kinds of harrow namely the disk, the spike-tooth, and the spring tooth.

4. Cultivation machinery is used to break down the soil before or after a crop is sown for covering seeds, for consolidating the soil and for hoeing out weeds. There are several types of cultivators designed for special crops and conditions: beet and bean cultivators, lister cultivators, rotary hoe cultivators, rod weeders, field cultivators, sub-soil and chisel cultivators.

5. **Planting equipment** is any power-operated device introduced to place seeds or plant parts in or on the soil for production of food and feed crops. It is classified as row-crop planters, broad-cast planters, grain drills and planting attachments for other equipment.

6. Applying such types of fertilizers as barnyard manure, granular fertilizers, and fertilizers in liquid and gaseous form is necessary where soils are deficient in plant food elements. Such **fertilizing equipment** as manure spreaders, fertilizer distributors, sprayers are in use.

7. Crops are harvested by the use of many kinds of **harvesting equipment** for all types of crops. The principal machines required to make hay are mowers, rakes, balers. Grain and all types of seed crops are harvested by combine harvesters. Beet harvesters are available to harvest beet, potato harvesters and diggers being for potatoes.

8. The tractor is the most important machine pulling many kinds of

implements that cultivate plant, fertilize, and harvest. Wheeled tractors being used for general farm work, track-laying tractors or crawlers have the great advantage that they can be available for heavy loads on any class of land.

Text-Based-Assignments

Language Study

Методические рекомендации

Для успешного выполнения упражнений данного раздела вам необходимо знать лексический минимум по теме, уметь переводить речевые тематические модели и использовать их в речи. Это понадобится вам также для глубокого понимания текста А и последующего обсуждения его на английском языке.

Тренировочные задания распределены по трем уровням сложности (А, В, С), что поможет проверить и оценить глубину и качество усвоения материала. Они отражают современный подход к оценке знаний, умений и навыков по иностранному языку. Максимальная оценка знаний на первом уровне (А) - 6 баллов, на втором (В) - 8 баллов, на третьем (С) - 10 баллов.

(A) Exercise 1. Guess the meaning of the following international words.

Method, farmer, disk, machine, physical, component, cultivation, cultivator, sprayer, tractor, primitive, to compact, to crush, to prevent, principal, production, to classify, granular, deficient, element, class.

(A) Exercise 2. The following groups of words are all related in meaning because they have the same roots. Notice the different suffixes indicating different parts of speech. Translate them into Russian.

To till, tillage, tillable, tiller;
To use, using, user, used;
To plow, plowing, plow;
To harrow, harrow, harrowing;
To plant, planting, plant, planter;
To cultivate, cultivator, cultivating, cultivation;
To fertilize, fertilizer, fertilizing, fertile, fertility.

(A) Exercise 3. Using a dictionary complete the table.

| Verbs | Adjectives | Nouns |
|--------------|------------|-------------|
| To eliminate | | |
| | | tilling |
| | harvested | |
| To seed | | |
| | | distributor |

(A) Exercise 4. Match the words.

| | |
|-------------|------------|
| to change | seeds |
| disc | elements |
| to destroy | plow |
| to level | tractor |
| to stir | weeds |
| to place | equipment |
| plant food | the soil |
| fertilizing | force |
| wheeled | the ground |

(A) Exercise 5. What are these words derived from? Notice the different suffixes, indicating different parts of speech.

Profitably, transmitting, agricultural, diversified, planting, mounted, movement, cultivation, covering, equipment, operated, production, planter, attachment, applying, fertilizing, sprayer, harvester, pulling, wheeled, compacted, distributor.

(A) Exercise 6. Find in each group the most common word or word-combination among the following.

- plow, harrow, agricultural implement, roller, tool, thinner, sub-soiler;
- wheeled tractor, crawler, machinery, combine harvester;
- to plow, to disk, to accomplish agricultural work, to harrow, to plant, to fertilize, to harvest.

(A) Exercise 7. Give all derivatives from the following verbs.

To prepare, to prevent, to penetrate, to cover, to apply, to harvest, to

plow, to cultivate, to plant, to sow, to dig, to fertilize, to eliminate, to improve.

(A) Exercise 8. What are the English equivalents for the following Russian ones.

- Движение: move, movement, mower, moveless, movable;
- Навесной: mount, mounted, mounting, mountain, mountaineer;
- Вынужденно: forcible, forceless, forceful, force, forcing, forced, forcedly;
- Устремленный: aim, aimed, aimless.

(A) Exercise 9. Find in the text the synonyms for these words.

Culture (2), land (2), tool (1), machine (1), equipment (2), nutrients (1), track-laying tractor (1), digger (1).

(A) Exercise 10. Find in the text the antonyms for these words.

To deteriorate, to compact, to harvest, special farm work, disadvantage, food crops, crops, sufficient, consumption.

(A) Exercise 11. Add the correct suffix to form a new word.

Farm, machine, plant, fertilize, profitable, grow, cultivate, mount, weed, spread, distribute, harvest, wheel.

Exercise 12. (A) Find in the text:

a) the nouns formed from these verbs:

to cultivate, to till, to plant, to grow, to equip, to move, to seed, to plant, to produce, to harvest, to dig, to fertilize;

b) the verbs these nouns are formed from:

accomplishment, division, preparation, improvement, penetration, prevention, placement, harvester;

c) the adverbs formed from these adjectives:

fast, easy, profitable, deep.

(A) Exercise 13. Complete the table with the appropriate adverbs.

| | |
|------------|--|
| final | |
| profitable | |
| numerous | |
| primary | |
| physical | |
| deep | |
| special | |
| principal | |
| general | |
| great | |

(A) Exercise 14. Translate these word combinations formed by the model Adj+N (какой).

agricultural implement, heavy machinery, principal kind, several types, special crops, special conditions, liquid form, gaseous form, principal machines, important machine, general work, great advantage.

(A) Exercise 15. Translate these word combinations formed by the model N+N (какой) , N+N (чего?).

Moldboard plow, disc coultter, skim coultter, beet cultivator, bean cultivator, lister cultivator, field cultivator, chisel cultivator, plant parts, food crops, feed crops, grain drill, barnyard manure, food elements, fertilizer distributor, seed crops, beet harvester, potato harvester.

(A) Exercise 16. Transform the model N of Adj+N into the model Adj+N+N.

Model: The School of Mechanical Engineering –The Mechanical Engineering School.

A component of a mounted plough, a faram of a semi -mounted plough, production of food crops, growing of feed crops, pulling of different implements, a part of an agricultural crop.

(A) Exercise 17. Translate the infinitive constructions into Russian.

Different machinery to plow, many kinds of plows to improve the physi-

cal conditions of the soil, harrows to stir the soil, cultivation machinery to consolidate the soil, spreaders to apply manure, sprayers to apply fertilizers in liquid form, mowers to make hay, beet harvesters to harvest beets, tractors to pull many kinds of implements, wheeled tractors to do general farm work.

(A) Exercise 18. Define which verb goes with which noun.

| | |
|----------------|----------------------|
| To pull | potatoes |
| To make | weeds |
| To harvest | parts |
| To consolidate | implements |
| To crush | granular fertilizers |
| To eliminate | hay |
| To plant | farm machinery |
| To apply | seeds |
| To cover | clods |
| To use | soil |

(B) Exercise 19. Find the word or word combination which does not fit into the group of synonyms.

To include – to contain, to improve, to comprise, to consist of, to have;
 Machinery – tool, device, movement, equipment, implement, machine;
 To accomplish – to do, to perform, to make, to produce, to fulfill, to act, to introduce;
 To keep – to move, to support, to hold, to maintain;
 Soil – ground, layers of soil, seed, land;
 To prevent – to let know, to use, to warn about, to avert, to anticipate, to forestall.

(B) Exercise 20. Match the words on the right with their opposites on the left.

| | |
|----------------------|---------------------------|
| To harvest | feed crops |
| Harvesting machinery | advantage |
| To improve | abundant |
| To compact | to deteriorate |
| Deficient | difficult |
| Disadvantage | slowly |
| General | to sow |
| Faster | primary tillage equipment |
| Easy | to break up |
| Food crops | special |

(B) Exercise 21. Match the words in (A) with their definitions on the left (B). One definition in B is odd.

| A | B |
|--------------|--|
| 1) equipment | preparation of land for crop-bearing |
| 2) seedbed | thickness of material laid or lying on or spread over a surface or forming one horizontal division |
| 3) loose | not compact, not closely packed |
| 4) manure | things needed for a purpose seed |
| 5) tillage | bed of fine soil in which to sow |
| 6) seed | a source of organic matter of plant or animal origin or a mixture of both |
| 7) layer | outfit, tools, apparatus |
| | a person who works in a branch of engineering |

(B) Exercise 22. Find out the words and phrases which are not connected with the problem of using farm machinery.

Moldboard plow, cattle, grain drills, poultry breeding, rakes, crawler, rod weeders, livestock-breeding, thinners.

(B) Exercise 23. Fill in the gaps with the suitable verbs or their derivatives from the exercise 7.

- 1) We all depend on... for food.
- 2) ... are plant nutrients.

- 3) This is the usual ... method for correcting deficiencies of micronutrients.
- 4) ... machines are used to break down the soil before or after a crop is sown.
- 5) ... fall into mounted, semi-mounted, disc, moldboard.
- 6) Grain drills are used for ... cereal grains.
- 7) Tillage is the ... of soil for planting.
- 8) Hay ... takes place over a short period.
- 9) The combine-harvester is used ... all types of grain and seed crops.
- 10) ... the physical condition of the soil, some farm machinery is used.

(B) Exercise 24. Rewrite these sentences using the underlined nouns as verbs.

Model: There was a lot of *rain* yesterday.
It *rained* a lot.

- 1) The farmer has a wide *range* of machinery.
- 2) *Plow* is designed to eliminate weeds.
- 3) *A harrow* is an implement used to crush the clods.
- 4) They grow many *plants* in their garden.
- 5) The device uses *force* to accomplish this work.
- 6) Cultivation machinery covers *seeds* after a crop is sown.
- 7) Wheeled tractors are used for general farm *work*.

(B) Exercise 25. Translate into Russian paying attention to the underlined words.

- 1) The secondary tillage equipment *used* by the farmer includes harrows, rollers etc.
- 2) *We used* cultivation machinery to break down the soil before a crop is sown.
- 3) The device is to *place* seeds in the soil.
- 4) Agricultural implements and machines occupy an important *place* on the modern farm.
- 5) My friend *works* at the Minsk tractor *works*.
- 6) The layers of soil have become *compacted*.
- 7) Heavy machinery *compacted* the soil greatly.

(C) Exercise 26. Make up your own sentences using the verbs

(nouns, adjectives) given in exercise 2.

(C) Exercise 27. Look at the meanings of these words and answer the question below the box.

| |
|---|
| <i>Crawler (n)</i> - 1) person or thing that move slowly, pulling the body along the ground or other surface; 2) overall garment made for a baby to crawl about in |
| <i>Clod (n)</i> - 1) lump of earth, clay; 2) clumsy, heavy-footed person, 3) a rough farm worker |
| <i>Free (adj)</i> - 1) not a slave, not in the power of another person or other persons, not in prison; 2) not fixed or held back; 3) without, released or exempt from; 4) without payment, costing nothing; 5) not occupied or engaged, not being used; 6) coming or given readily, lavish; 7) without restraint |
| <i>Keep (v)</i> - 1) cause sb or sth to remain in a specified state or position; 2) cause a process or state to continue; 3) prevent, hold back, refrain; 4) not let others know about it; 5) pay proper respect to, be faithful to, observe, fulfill; 6) celebrate; 7) guard, protect; 8) continue to have; 9) support, take care of, provide what is needed for, maintain |

What is the meaning of these words in these sentences:

1. Crawlers are capable of doing very heavy work.
2. Disk harrows are used to crush the clods.
3. It is necessary to have the soil free from weeds during the growth of plants.
4. Primary tillage equipment helps the farmer to keep the soil loose.

Text Study

Методические рекомендации

Для успешного выполнения заданий этого раздела, необходимо знать лексический минимум по теме, уметь переводить речевые тематические модели и использовать их в речи. В работе над текстами вам помогут тематический словарь, а также специализированные словари (сельскохозяйственный и политехнический).

Тренировочные задания распределены по трем уровням сложности (A, B, C). Максимальная оценка знаний на первом уровне (A) - 6 баллов, на втором (B) - 8 баллов, на третьем (C) - 10 баллов.

(A, B) Exercise 1. Look through the text again to define whether the following statements are true or false. Correct the false ones.

- 1) There is a wide range of machines to plant.
- 2) Agricultural implements may be divided into several groups.
- 3) To prepare the soil for harvesting is the aim of tillage.
- 4) A harrow is designed to eliminate weeds.
- 5) After a crop is sown, fertilizing equipment is used.
- 6) Planting equipment is used to place seeds in the soil.
- 7) When soils are deficient in plant food elements, many types of fertilizers are applied.
- 8) There are diggers to harvest all types of seed crops.
- 9) A beet harvester is the most important machine on the farm.
- 10) Wheeled tractors are available for heavy loads.

(A) Exercise 2. Complete the sentences with the appropriate ending.

- 1) Today the farmer has many agricultural implements to... .
- 2) The machine is a device... .
- 3) Ploughs are divided into... .
- 4) The principal parts of a plow are... .
- 5) The sub-soiler breaks up the layers of soil... .
- 6) Cultivators are designed for
- 7) To make hay
- 8) To harvest beet
- 9) To pull many kinds of implements
- 10) To do general farm work

(A) Exercise 3. Scan the text again to find English equivalents for the following Russian words.

Убирать урожай без потерь; преобразовывать силу в движение; проникать очень глубоко; проход техники; специальные условия; кормовые культуры; приспособления для посадки; иметь преимущество; почвы, страдающие от недостатка питательных веществ.

(A, B) Exercise 4. Divide the text into several parts. Find the key words in each part.

(A) Exercise 5. Read the text again and say what words the author uses to describe.

- 1) The operations performed by farm machinery;
- 2) The three principal kinds of harrows;
- 3) The operations performed by a plow;
- 4) The function of a sub- soiler;
- 5) The principal parts of a plow;
- 6) The types of cultivators;
- 7) The types of planting equipment;
- 8) The machines to make hay;
- 9) The most important machine on the farm.

(A) Exercise 6. Scan the text to define the terms below.

- 1) machine
- 2) harrow
- 3) planting equipment
- 4) tractor

(A) Exercise 7. Write out of the text all the words and word combinations that belong to each group.

| |
|---------------------------|
| 1. machinery to plow |
| 2. machinery to disc |
| 3. machinery to harrow |
| 4. machinery to plant |
| 5. machinery to fertilize |
| 6. machinery to harvest |

(A) Exercise 8. Write out of the text all the words and word combinations that belong to each group.

| |
|---------------|
| 1. tractor |
| 2. cultivator |
| 3. harrow |
| 4. plow |

(A) Exercise 9. Choose the correct answers to the following questions which you think fit best.

1. What is the aim of tillage?
 - a. to cultivate
 - b. to prepare the soil
 - c. to harvest
2. What is a plow designed for?
 - a. making the soil more fertile
 - b. preparing the suitable seedbed
 - c. placing seeds
3. How many components does a plow have?
 - a. 4
 - b. 7
 - c. 6
4. What is a bean cultivator designed to?
 - a. to cultivate beets
 - b. to cultivate beans
 - c. to cultivate weeds
5. What can a tractor pull?
 - a. many kinds of implements
 - b. food crops
 - c. feed crops

(A, B) Exercise 10. Divide the text into several parts. Find the key sentences in each part.

(A) Exercise 11. Read paragraph 3 and add the verbs to the following words to have a short description of primary tillage equipment.

- 1) soil
- 2) plow
- 3) sub- soiler
- 4) harrow

(A) Exercise 12. Read paragraphs 4, 5 and add the verbs to the following words to have a short description of planting equipment and

cultivation machinery.

- 1) soil
- 2) crop
- 3) seeds
- 4) planter

(A) Exercise 13. Read paragraph 6 and add the verbs to the following words to have a short description of fertilizing equipment and harvesting equipment.

- 1) fertilizer
- 2) crops
- 3) combine harvester
- 4) digger

(A) Exercise 14. Try to classify the following in the same way.

Model: tractor (wheeled, track-laying, farm, all-purpose, general-purpose tractor, track-type)

- 1) machinery
- 2) equipment
- 3) plough
- 4) harrow
- 5) fertilizer

A) Exercise 15. Complete the following chart using the key-words given below.

Cultivating machinery -----

Fertilizing equipment -----

Harvesting equipment -----

Key words: cultivator, manure spreader, sprayer pump, ploughshare,

moldboard, wheel bearing, disc coulter, anti-rust preparation, lubrication, chain drive, sprocket, clean down, to be coated.

(B) Exercise 16. Fill in the gaps with the suitable words from the box.

Crawlers, planting equipment, cultivation machinery, cover, motion, sprayers, plant, level, seedbed, place, manure spreaders, harrow, beet

- 1) The machine changes ... into work.
- 2) Plow is available to prepare a
- 3) To ... the ground a ... is used.
- 4) To ... seeds, ... is used.
- 5) ... can ... parts or ... seeds in or on the soil.
- 6) Fertilizers in liquid form are applied by
- 7) ... apply barnyard manure.
- 8) ... can be available on any type of land.

(B) Exercise 17. Name all farm machinery which can perform the operations from exercise 3.

(B) Exercise 18. Write out from the text all the words and word combinations that belong to each group.

| |
|----------------|
| 1. tillage |
| 2. cultivating |
| 3. fertilizing |
| 4. harvesting |

(B) Exercise 19. Read the text and underline the differences between.

- a. the aims of tillage and the aims of cultivation;
- b. the aims of fertilizing and the aims of harvesting;
- c. plows and harrows;
- d. planting machinery and harvesting machinery.

(B) Exercise 20. Fill in the table with the information from the text.

| The machine | Its function | Sphere of application | The main components |
|----------------------|--------------|-----------------------|---------------------|
| 1. plow | | | |
| 2. sub-soil | | | |
| 3. harrow | | | |
| 4. cultivator | | | |
| 5. grain drill | | | |
| 6. manure spreader | | | |
| 7. combine harvester | | | |
| 8. tractor | | | |

(B) Exercise 21. Scan the text to define the terms below.

1. machine
2. tillage
3. plow
4. sub-soiler
5. harrow
6. row-crop planter
7. granular fertilizer
8. sprayer
9. manure spreader
10. combine harvester
11. digger
12. tractor

(B) Exercise 22. Read the text once more and explain the differences between.

- a) the primary tillage equipment and the secondary tillage equipment;
- b) cultivation machinery and planting equipment;
- c) fertilizing equipment and harvesting equipment;
- d) grain drills and row-crop planters;
- e) combine harvesters and diggers;
- f) wheeled tractors and track-laying tractors.

(B) Exercise 23. State the functions of.

- 1) agricultural machinery
- 2) primary tillage equipment
- 3) secondary tillage equipment
- 4) cultivation machinery
- 5) fertilizing equipment
- 6) harvesting equipment
- 7) tractor

(C) Exercise 24. Imagine you are the examiner. Write down 5 questions about these subjects.

1. The main components of plows;
2. Types of fertilizers;
3. The equipment used for tillage;
4. Agricultural implements;
5. Machines required to make hay.

Work in pairs. Take it in turns to be the examiner and the candidate.

(C) Exercise 25. Give your reasons for the following statements.

- a) A farmer must have a wide range of farm machinery;
- b) The aim of tillage is to keep the soil loose;
- c) The aim of tillage is to keep the soil free from weeds;
- d) There are several types of cultivators for special crops;
- e) There are several types of cultivators for special conditions;

(C) Exercise 26. Why do you think...

- a) tractor to be the most important machine on the farm;
- b) crawlers to have the great advantage in the farm work;
- c) fertilizers to be applied;
- d) sub-soiler to be used;
- e) agricultural implements to be numerous and diversified.

Compare your reasons with a partner.

(C) Exercise 27. Scan through the text quickly and identify what the following words refer to.

1. that
2. which
3. namely
4. it
5. before or after

(C) Exercise 28. Compare.

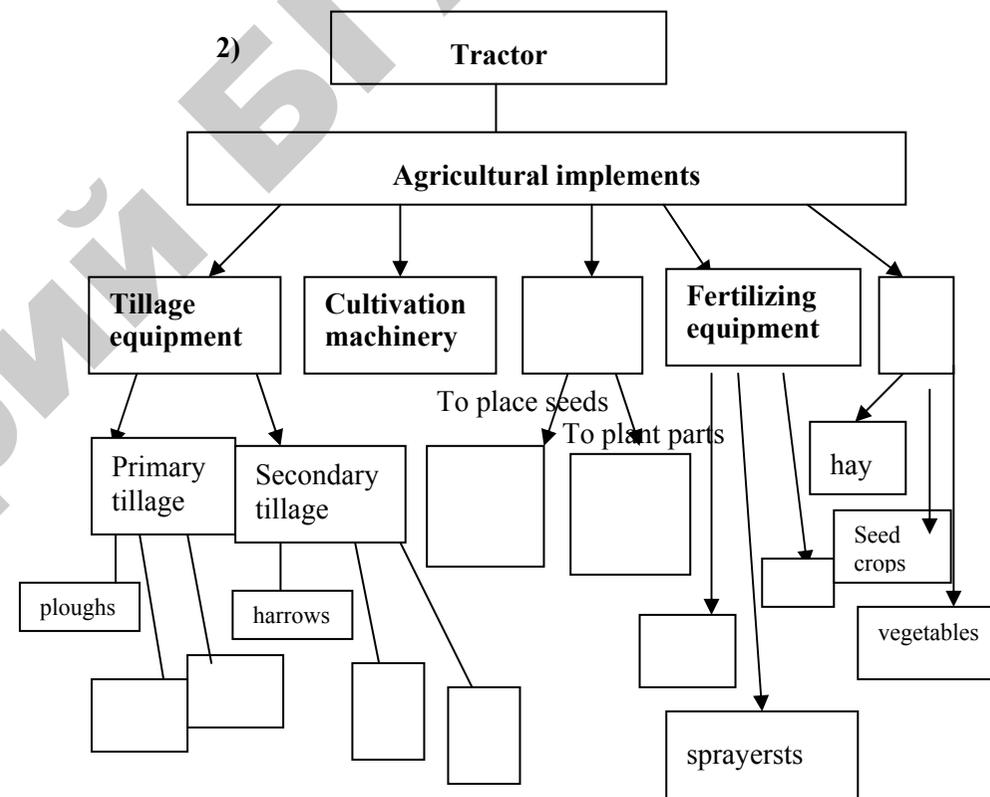
- a) Functions of plows and sub-soilers
- b) Functions of harrows and plows
- c) Functions of beet cultivators and bean cultivators
- d) Functions of grain drills and bean cultivators
- e) Functions of granular distributors and manure spreaders
- f) Functions of beet harvesters and diggers
- g) Functions of combine harvesters and potato harvesters
- h) Functions of wheeled tractors and crawlers.

Discussion

(A) Exercise 1. Complete the diagram and the table.

1)

| | |
|--------------------------|-------------------|
| Agricultural operations: | sowing, ... |
| Agricultural crops: | wheat, beans, ... |



(A) Exercise 2. Speak about the functions of all groups of agricultural machinery.

(A, B, C) Exercise 3. Make the plan of the text. Sum up the content of the text according to your plan.

(A, B, C) Exercise 4. Provide answers to the following questions.

- 1) What agricultural operations is farm machinery known to perform?
- 2) What crops (vegetables, fruits, grain crops, industrial crops) are sown (planted), harvested on the farm?
- 3) What is a machine?
- 4) What is the most important machine on the farm? What do you know about the types of tractors? What implements can a tractor pull? What is the difference between wheeled tractors and track-laying tractors?
- 5) How many groups agricultural implements and machines may be divided into? What are these groups?
- 6) What is tillage? What equipment can be used for tillage?
- 7) What is plow designed for?
- 8) What kinds of plows do you know?
- 9) What are the main parts of a plow?
- 10) Why may the layers of soil be compacted and how can we solve this problem?
- 11) What are harrows used for?
- 12) What are the principal kinds of harrows?
- 13) What machinery is used to break down the soil before or after a crop is sown?
- 14) Why are there many types of cultivators in use?
- 15) What is planting equipment designed to?
- 16) What are the means to improve soil fertility? What fertilizers do you know? What equipment helps farmers to apply fertilizers?
- 17) What machinery is required for harvesting?

(B) Exercise 5. Compare the four groups of agricultural implements and machines, their functions, their differences.

(B) Exercise 6. Speak on the following situations:

1) You have to sow and harvest such grain crops as wheat and barley. Speak about all the operations you will perform and the machinery you will use.

2) You have to make hay. Speak about the operations you will perform and the machinery you will use.

3) You have to plant potatoes. Speak about all the operations you will perform and the machinery you will use.

(C) Exercise 7. Speak about the place of sowing, planting, ploughing, harrowing, cultivating, fertilizing, harvesting, rolling, fallowing, mulching in the field of different kinds of agricultural operations.

(C) Exercise 8. Make a dialogue according to the situations. Use the words *necessary, useful, essential* etc. and expressions of requesting, and your opinion.

Student A. Help your friend to understand the usage of numerous types of agricultural implements and machines used on the farm. Get ready to answer his questions.

Student B. Help your friend to understand the aims of tillage and different implements used.

Student C. You have missed your classes and you don't know anything about cultivation machinery. Prepare your questions about cultivation machinery.

Student D. You are asked about the means of improving soil fertility and implements required. Answer the questions.

Student E. You want to buy new crawlers but you have doubts. Ask about the advantages and disadvantages of crawlers and wheeled tractors.

(C) Exercise 9. Comment on the following aphorisms.

As you sow so must you reap.

The evil field will evil yield.

Illustrate one of them using a real situation.

(C) Exercise 10. Do we have the same types of machines in Belarus? Don't you think there is any necessity to use different types of agricultural machines on our Belarusian farms?

Text B: «Component Parts of Machines»

ACTIVE VOCABULARY

Nouns

| | |
|---------------------------------|--------------------------------------|
| bearing | подшипник |
| bolt | болт |
| ball | шарик |
| ball bearing | шариковый подшипник |
| cam | кулак, кулачок, эксцентрик |
| clutch | сцепление |
| cylindrical pin | цилиндрический штифт |
| conical pin | конический штифт |
| differential | дифференциал |
| fuel | топливо |
| friction clutch | фрикционная муфта |
| fluid power | гидравлическая система |
| gearbox | коробка передач |
| intermittent motion | прерывистое движение |
| key | ключ, шпонка |
| left hand thread | левая резьба |
| nut | гайка |
| nose | передняя часть машины |
| overrunning clutch | муфта свободного хода |
| pulley | шкив, блок, ролик |
| pin | штифт, палец, стержень, шейка (вала) |
| power take- off – shaft (p.t.o) | вал отбора мощности |
| right hand thread | правая резьба |
| rolling bearing | подшипник качения |
| roller bearing | роликовый подшипник |
| rear wheel | заднее колесо |
| sprocket | звездочка, ведущее колесо (гусеницы) |
| shaft | вал, ось, шпиндель |
| spring | пружина |
| stationary motion | постоянное движение |
| sliding bearing | подшипник скольжения |
| surface | поверхность |

| | |
|---------------------|---|
| supporting bearing | опорный, несущий подшипник |
| safety clutch | предохранительная муфта |
| speed ration | отношение скоростей, передаточное число |
| screw | винт, болт, шуруп |
| thread | резьба, нарезка |
| transmission system | трансмиссионная система |
| valve | клапан |
| washer | шайба |

Verbs

| | |
|--------------------------------|-------------------------------|
| alter | изменять (ся) |
| accomplish | выполнять |
| bring about (brought, brought) | вызывать, быть причиной |
| convert | вращать |
| fasten | закрепить, крепить, скреплять |
| move forward | двигать вперед |
| revolve | вращать |

Answer the following questions.

What component parts of a machine do you know? Must you know well all of them? Why? Do you know how all these parts are connected? You will learn it while reading the text B.

«COMPONENT PARTS OF MACHINES»

The great variety of bolts is used in *the construction* of farm machinery. Most bolts are classified according to length, diameter and type of thread.

Many types of *nuts* are used on farm machinery. Many types of *screws* are also used in the construction of farm machinery. Screws threads are made right-hand and left-hand.

Different kinds of *washers* are used in connection with bolts in farm machinery. They may be used on the end either beneath the head of the bolt or beneath the nut.

There are several means *to fasten* sprockets and pulleys to rotating shafts. Keys are commonly used to fasten pulleys and sprockets to shafts.

Pins are also needed. Pins can be divided into cylindrical pins and conical or taper pins.

Springs play an important part in the operation of farm machinery.

A cam is *an essential part of farm equipment*. A cam produces intermittent motion. Anything resting against the cam will be moved only when the nose comes around to it; otherwise it remains stationary.

Thus machine parts are held together by different components.

Bearings in farm equipment are required *to hold* parts in position. Bearing are divided into sliding and rolling. In sliding bearing, the revolving shaft is in direct contact with a fixed bearing surface. Rolling bearings have balls or rollers placed between the shafts and supporting bearing. Bearing with rolling contact may be divided into ball bearings and roller bearings.

A machine is a device that uses force to accomplish something. More technically *it* is a device that transmits and changes force or motion into work. A machine must have moving parts. An engine produces power by burning air and fuel.

Clutch, gearbox and differential are *the necessary components in the transmission system*. A clutch is a device between a power source and a machine or between the working parts in a machine. In the operation of farm equipment, clutches permit the starting of the engine with the machine disconnected. Friction clutches, safety clutches, overrunning clutches are in use. Gearbox brings about a speed reduction between the engine and rear wheels. The speed ratio can be altered by the gearbox. The differential unit permits one wheel to rotate faster than the other when the machine turns.

A hydraulic system is a method of transmitting power from the power source to the machine or component being operated. *It* contains many parts: the pump that converts the power from the engine to fluid power, the cylinder or motor that converts the fluid power to the motion and action that are being performed, valves, filter which determines the useful life of other parts in the system.

In operation of many farm machines, tractor is used to move the machine forward. The power is transmitted from tractor to machine by means of a *power take-off shaft*.

Text Based Assignments

Language Study

(A) Exercise 1. Look through the text “Component Parts of Machines” quickly and find the italicized key words and phrases to make predictions about what you expect the text to be about.

(A) Exercise 2. Guess the meaning of the following international words.

Construction, diameter, type, bolt, rotation, cylindrical, operation, machine, component, position, contact, differential, transmission, system, friction, reduction, hydraulic, method, motor, tractor.

(A) Exercise 3. Find in the text the English equivalents for the following Russian words.

Сельскохозяйственная техника, крепить, соединять, поддерживать, преобразовывать, сжигать, запуск двигателя, чередовать, вращаться, управлять, приводить в движение, вал отбора мощности.

(A) Exercise 4. Give the Russian equivalents for the following English words.

According to, the construction of farm machinery, in connection with, beneath, intermittent motion, to remain stationary, to hold in position, fixed bearing surface, rolling contact, to change force into work, moving parts, a power source, working parts, a speed reduction, rear wheel, speed ration, fluid power, useful life, to move forward, a power-take-off shaft.

(A) Exercise 5. Make up nouns from the following verbs with the help of the suffixes –sion, -tion.

To construct, to connect, to operate, to produce, to intermit, to move, to pose, to transmit, to disconnect, to reduce, to alter, to rotate, to convert, to determine.

(A) Exercise 6. The text describing the main component parts of agricultural machines includes many word-forms-derivatives. Find the derivatives of the words.

1. to move (3)
2. to use (2)
3. to roll (2)
4. to transmit (3)
5. to operate (2)

(A) Exercise 7. Enrich your vocabulary. Make the nouns from the following adjectives with the help of suffixes –ility, -ivity.

Variable, changeable, productive, reliable, available, serviceable, visible, flexible, essential, active.

(A) Exercise 8. Make up adverbs from the following adjectives with the help of the suffix –ly.

Common, technical, different, useful, essential, direct, necessary, hydraulic.

(A) Exercise 9. What are these nouns derived from.

Transmission, equipment, washer, connection, construction, operation, motion, bearing, position, reduction, action.

(A) Exercise 10. Translate the following word combinations formed by the model N+N. When making your translation think that you should use an adjective to do it better.

farm machinery, taper pin, farm equipment, ball bearing, roller bearing, transmission system, friction clutch, speed ration, fluid power, speed reduction, machine part, safety clutch.

(A) Exercise 11. Transform the model N-of-N into the model N+N.

Type of thread, construction of farm machinery, head of the bolt, operation of farm machinery, part of farm equipment, component of transmission system.

(A) Exercise 12. What are these words derived from.

Rotating, resting, sliding, rolling, revolving, supporting, moving, burning, working, starting, overrunning, transmitting;
Used, classified, made, divided, moved, held, required, fixed, placed, disconnected, altered, operated, performed, transmitted.

(A) Exercise 13. Find the synonyms to the following words in the text.

To do, agricultural, to classify, a part, to include, a motor, a conical pin, a motion, to utilize, to stay, a ball, to keep up, a force, an implement, a machinery, decrease, back, quickly, to work, to change into, facilities, to bring about.

(A) Exercise 14. Find the word on the right which should logically follow the word on the left.

| | |
|---------------|-------------|
| To fasten | the power |
| Rotating | bearing |
| Intermittent | stationary |
| To remain | shaft |
| To hold | the machine |
| Rolling | wheel |
| To accomplish | motion |
| To rotate | together |
| To transmit | sprockets |
| To move | the work |

(A) Exercise 15. Translate the following word combinations formed by the model Adj+N.

A great variety, several means, conical pins, an essential part, intermittent motion, a hydraulic system, useful life.

(A) Exercise 16. Find the most common word or word-combination among the following.

Nut, screw, bolt, part, pulley, key, pin;
Clutch, transmission system, gearbox, differential;

Pump, hydraulic system, motor, valve.

(A) Exercise 17. The following groups of words are related in meaning because they have the same roots. Notice the different suffixes indicating different parts of speech. Translate them.

Connect (v), connection (n);
 Rotate (v), rotation (n),
 Cylinder (n), cylindrical (adj);
 Produce (v), producer (n), production (n),
 Common (adj), commonly (adv);
 Direct (v), direction (n), directly (adv);
 Roll (v), roller (n);
 Reduce (v), reduction (n);
 Move (v), motion (n);
 Transmit (v), transmission (n)

(A) Exercise 18. Choose the suitable preposition in brackets. Translate the sentences.

- 1) The power –take –off must be equipped (with, by, of) two universal joints.
- 2) Shafts are employed (for, to, by) transmit power.
- 3) The pulleys and belts may be divided (to, for, into) flat and v-shaped.
- 4) Key fastens sprocket (at, to, on) shaft.
- 5) This device changes motion (to, for, into) work.
- 6) A speed reduction between the engine and rear wheel is brought (about, by, from) by gearbox.
- 7) It transmit power (at, from, on) the power source (to, at, on) the machine.

(A) Exercise 19. Find these words in the text and say what part of speech they are.

Thread, screw, pin, bearing, differential, speed, power.

(A) Exercise 20. Complete the table with the missing words.

| | verb | Noun |
|------------------|------------|-----------|
| | | unit |
| Заводить (мотор) | | |
| | to perform | |
| | | reduction |
| крепить | | |
| | to revolve | |
| | | fuel |

(A) Exercise 21. Compare the meanings of these words in these word combinations.

| | |
|------------|----------------------|
| 1) right | -right-about |
| | - right-and-left |
| | -right-angled |
| | -right- hand |
| | -right-lined |
| 2) left | - left-hand |
| | -left-luggage office |
| | - leftmost |
| | -leftwards |
| 3) to move | - left-wing |
| | - to move forward |
| | -to move about |
| | -to move away |
| | - to move over |
| | - to move in |

(A) Exercise 22. Translate the following combinations of words.

- a) Component part, a component part of a machine, to use this component part of a machine;
- b) Many screws, many screws of the farm equipment;
- c) Sprockets of this machine, to fasten sprockets to this machine;
- d) Shafts, different shafts, to fasten pulleys to different shafts;
- e) Springs, springs for this machine.

(B) Exercise 23. Match the nouns with the suitable adjectives. Point out the prefixes and suffixes of the adjectives. What about their meanings.

| | |
|--------------|--------------------|
| 1) operation | a) disconnected |
| 2) movement | b) discontinuous |
| 3) position | c) inadapttable |
| 4) method | d) unaccomplished |
| 5) wheel | f) disassembled |
| 6) machine | g) unknown |
| 7) source | h) joyless |
| 8) life | j) disadvantageous |

(B) Exercise 24. Point out words and phrases which are not connected with the problem of the component parts of machines.

Farm machinery, dormitory, to graduate from, motion, revolving shaft, differential, labor-saving technologies, grain crops, to start the engine, to convert the power to the motion, to cultivate.

(B) Exercise 25. What parts of speech are these words? What are their meanings? Translate the sentences.

- 1) Screws *threads* may be left-hand. He *threads* the film into the camera.
- 2) *Pins* are subdivided into taper or cylindrical. She *pins* these parts together.
- 3) *Spring* is coming. *Spring* plays an important part in the operation of agricultural machinery.
- 4) He has a long *nose*. The *nose* comes around to the cam.
- 5) *Bearings* hold parts in position. He is *bearing* an arm.
- 6) It produces power by *burning* fuel. The house is *burning*.

(B) Exercise 26. Find the correct word on the right opposite in the meaning to the one on the left.

| | |
|--------------|-------------|
| connected | stationary |
| construction | front |
| right-hand | destruction |
| intermittent | to stop |

| | |
|-----------|---------------|
| moving | width |
| to start | to move |
| reduction | left-hand |
| rear | disconnected |
| length | increase |
| to remain | uninterrupted |

(B) Exercise 27. Match the word on the left (A) with its definitions on the right (B).

| A | B |
|-------------|--|
| 1) Power | a) to begin something |
| 2) Speed | b) to support something |
| 3) Tractor | c) a measure of the time in which something moves or happens |
| 4) Bearing | d) a motor vehicle for pulling farm machinery or other heavy loads |
| 5) Engine | e) a device for preventing friction in a machine |
| 6) Wheel | f) mechanical or electrical energy |
| 7) To start | g) a machine that provides power |
| 8) Roller | h) a round device that turns on a shaft that passes through its centre |
| 9) To hold | i) a cylinder for rolling over things or on which something is wound |

(B) Exercise 28. Complete these definitions.

- a) A tractor is a machine...
- b) A component part is a ...
- c) Diameter is a ...
- d) Farm machinery is ...
- e) Air is a substance ...
- f) Fuel is...
- g) To operate a machine is to ...

(B) Exercise 29. Give the English equivalents for the prepositions in brackets.

- 1) There is a speed reduction (между) the engine and rear wheels.
- 2) They are divided (в соответствии с) diameter.
- 3) Rolling bearing are divided (на) ball and roller bearings.
- 4) A machine uses force (для) do some work.
- 5) It converts power (с) the engine (на) fluid power.
- 6) The power is transmitted (посредством) of a power-take-off.

(B) Exercise 30. Translate the following word groups. Using different parts of speech (nouns, infinitives, participles, and gerunds) will help you do it better.

Средства *крепления* звездочек; пружины играют важную роль для *управления* техникой; сцепление позволяет *запуск* двигателя; дифференциал позволяет *вращение*; фильтр, *определяющий* износостойкость; двигатель, *превращающий* силу в движение; сила, *переданная* с трактора.

(B) Exercise 31. Fill in the gaps with the suitable verbs or their derivatives from the exercise 20.

- 1) ... is burned very quickly.
- 2) The tractor driver ... the engine.
- 3) Combine harvester ... many agricultural operations.
- 4) There is some speed ... there.
- 5) The shaft ... and it is in direct contact with a fixed bearing surface.
- 6) The stewardess asked the passengers to... the belts.
- 7) The transmission system ... clutches gearbox and differential.
- 8) .I know this It is known as the differential.
- 9) The gearbox ... the speed ratio.

(C) Exercise 32. Use the word given in brackets at the end of each line to form a word that fits in the gap in the same line.

- 1) ... of the tractor includes definite devices and assemblies (*to construct*).
- 2) ... is designed for transmitting the torque of the engine to different

working equipment (*to transmit*).

- 3) The operator may ... the work of the tractor as whole and its separate units (*to control*).
- 4) ... equipment includes PTO, pulley, trailing and mounted implements (*to work*).
- 5) ... bearings differ from ball bearing (*to roll*).
- 6) Farm machinery and tractors are required to function always ... (*proper*).
- 7) The tractor will move and be capable of ... work (*to do*).

Text Study

(A, B) Exercise 1. Define whether the following statements are true or false. Correct the false ones.

- 1) Differential is one of the components of the transmission system.
- 2) Bolts may be classified according to length and width.
- 3) Bolts are used in connection with many kinds of washers.
- 4) Sprockets are fastened by several means.
- 5) In sliding bearing the revolving shaft is not in direct contact with a fixed bearing surface.
- 6) The power in the tractor is transmitted to a machine by a power-take-off.
- 7) Tractor is used in operation of many machines.
- 8) Keys are used to fasten bearings.
- 9) An engine produces power by burning air.
- 10) Bearing with sliding contact may be divided into ball and roller bearing.

(A) Exercise 2. Complete each sentence with the appropriate ending from the box below.

- 1) A machine uses force ...
- 2) A clutch is situated between ...
- 3) The method of transmitting power from the source power to the machine ...
- 4) The aim of a gearbox is ...
- 5) Screw threads ...
- 6) Washers are used ...
- 7) Machine parts are held together ...

| |
|--|
| by different components |
| are made right-hand and left-hand |
| with bolts |
| to do some work |
| is called a hydraulic system |
| a power source and the working parts |
| to bring about a speed reduction between the engine and rear wheel |

(A, B) Exercise 3. Write out of the text all the words and word combinations that belong to each group.

| Component parts of the transmission system | Component parts of a hydraulic system | Types of bearings | Components which hold machine parts |
|--|---------------------------------------|-------------------|-------------------------------------|
| | | | |

(A) Exercise 4. Write out of the text all the component parts of machines.

(A) Exercise 5. Add some verbs from the text to the following component parts of machines.

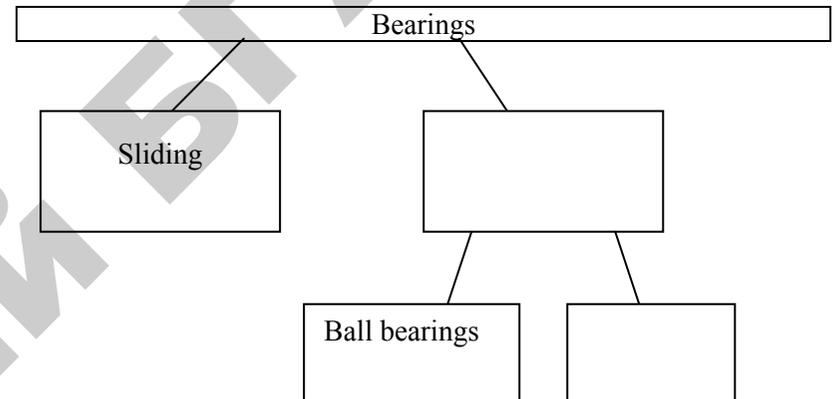
- Pump
- Tractor
- Cam
- Bearing
- Key
- Engine
- Gearbox

(A) Exercise 6. Find in the text the sentences that mean the same as.

- 1) Имеется несколько способов крепления звездочек.
- 2) Он позволяет одному колесу вращаться быстрее, чем другому.
- 3) Трактор используется для приведения в движение различных машин.
- 4) Резьба может быть правосторонняя и левосторонняя.
- 5) Гидравлическая система включает множество частей.
- 6) Шайбы используются с болтами.

- 7) Пружины помогают в управлении машиной.
- 8) Они крепят звездочки к валу.
- 9) Отношение скоростей изменяется благодаря коробке передач.

(A, B) Exercise 7. Refer to the paragraph which carries the main idea about bearings and complete the diagram below.



(A, B) Exercise 8. Refer to the paragraph which carries the main idea about transmission system and arrange these nouns into a column.

Clutch, gearbox, differential, friction clutch, safety clutch, overrunning clutch.

(A, B) Exercise 9. Refer to the paragraph which carries the main idea about different components of machines which hold machine parts. Put the words given below in pairs. Two words have no pairs. Which ones are they.

Bolts, engines, pulleys, shafts, pumps, keys, washers, nuts, pins.

(A) Exercise 10. For questions 1-5, choose the answers (A, B, C) which you think fits best.

1. Where is power produced?

- a. in the engine

- b. in the gearbox
- c. in the clutch

2. What is used in operation of many machines?

- a. component parts of machines
- b. tractor
- c. differential

3. How many ways to fasten sprockets to rotating shafts are there?

- a. some
- b. only one
- c. no one

4. Why are different parts of machines held together?

- a. due to different components
- b. due to the farm equipment
- c. due to the engine

5. How can the speed be altered?

- a. by clutch
- b. by gearbox
- c. by fluid power

6. What must a machine have to move?

- a. moving parts
- b. tractor
- c. a component

(B) Exercise 11. Fill in the gaps with the suitable words from the box. If you are given endings to choose from in a box, make sure the ending you choose is grammatically possible, logical.

| | | |
|----------------------------|-----------------|--------------|
| <i>transmission system</i> | <i>filter</i> | <i>balls</i> |
| <i>motion</i> | <i>wheel</i> | <i>fuel</i> |
| <i>the component parts</i> | <i>bearings</i> | |

- 1) The second unit in the... is the gear box.
- 2) When a tractor turns the left ... must rotate faster.
- 3) ... are placed between the shaft.
- 4) A machine changes ... into work.
- 5) ... may be divided into two main classes.
- 6) When designing ... of farm equipment must be taken into consideration.
- 7) Energy is produced by burning ... within the engine.
- 8) ... determines the useful life of many parts in the hydraulic system.

(B) Exercise 12. Put the sentences into the right order. Mind the context of the text.

- 1) Clutch, gearbox and differential are the main components of the transmission system.
- 2) The machine parts are held together by different components.
- 3) Screws are used in the farm machines.
- 4) The differential permits one wheel to rotate faster than the other.
- 5) Rolling bearings have rollers.
- 6) A power-take-off transmits the power from the tractor to machine.
- 7) Pulleys and sprockets are fastened to shafts.
- 8) Intermittent motion is produced by a cam.
- 9) The useful life of the machine parts is determined due to a filter.
- 10) There are moving parts in a machine.

(B) Exercise 13. Read the text and write down the key words.

(B) Exercise 14. Read the text one more and find out the key sentences.

(B) Exercise 15. Read the text and explain the differences between.

- 1) washers and keys
- 2) cams and bearings
- 3) sliding bearings and rolling bearings
- 4) clutches and gearboxes
- 5) differential units and pumps
- 6) cylinders and filters

(B) Exercise 16. Organize the list of words into 3 groups and give a title to each group.

Washer, bolt, clutch, pump, conical pin, gearbox, cylinder, cam, filter, sliding bearing, valve, nut, pulley, key.

(B) Exercise 17. Replace the words and word combinations in italics. Use the words from the text.

- 1) Many types of bolts are used *to construct agricultural machinery*.
- 2) Different kinds of washers are used *to connect* bolts.
- 3) The revolving shaft is *directly connected* with a fixed bearing surface.
- 4) Clutch permits *to start* the engine with a machine disconnected.
- 5) Keys are *in common use*.

(B) Exercise 18. Make the schemes reflecting the link between the following objects.

- 1) Bolts, nuts, screws, washers, sprockets, pulleys, shafts, keys, pins, cams;
- 2) Bearings, balls, sliding bearings, rolling bearings, ball bearings, roller bearings;
- 3) Clutches, gearboxes, differentials, transmission system, friction clutches, safety clutches, overrunning clutches;
- 4) Pumps, cylinders, valves, filters, hydraulic system.

(C) Exercise 19. Scan through the text quickly and identify what the following words refer to.

They, it (3), which, that (2).

(C) Exercise 20. Give your reasons for the following statements. Consult the text.

- 1) Different parts are used in the construction of farm machinery.
- 2) A hydraulic system is necessary in the construction of farm machinery.
- 3) Fuel is necessary in a machine.
- 4) Tractor is important to operate many farm machines.
- 5) Bearings are required in a machine.
- 6) Clutches play an important part.

(C) Exercise 21. Imagine you are a farm machinery mechanic. Write down 5 questions about these subjects.

- a) transmission system
- b) changing force into work
- c) hydraulic system
- d) cam
- e) tractor

Work in pairs. Make up a dialogue.

(C) Exercise 22. What do you know about.

- Bolts
- Screws
- Washers
- Keys
- Pins
- Cams
- Bearings
- Clutches
- Gearboxes
- Differentials
- Pumps
- Cylinders
- Filters
- Power-take-off

(C) Exercise 23. Link the sentences using appropriate linking words and other connectors.

A) *Where*

An engine is a component part of a machine. The power is produced. This is a sliding bearing. The revolving shaft is in direct contact with a fixed bearing surface.

B) *That*

A machine is a device. It uses force to do some work. It contains a pump. The pump converts the power from the power source

to the machine.

c) *By*

The machine is moved forward. Tractor is used.
The parts are held in position. Bearings are used.

d) *When*

One wheel rotates faster. The machine turns.
The cam will be moved. The nose comes around to it.

e) *Which*

Filter is a part of hydraulic system. It determines the useful life of other parts in the system.
Screws are their threads. Threads are made right-hand and left-hand.

f) *Such as*

Bearings are available in two forms. Bearings can be sliding and rolling.

g) *Then*

The power is produced in the engine. It is transmitted to the machine.

(C) Exercise 24. Choose some verbs from the box and write sentences about.

- Power
- Machine parts
- Engine
- Speed
- Transmission system
- Agricultural implements and machines
- Hydraulic system
- Tractor

To fasten, to produce, to hold, to accomplish, to start, to alter, to bring about, to rotate, to convert, to move

DISCUSSION

(A, B) Exercise 1. Divide the text into several parts and entitle each part in order to have the plan of the text.

(A, B, C) Exercise 2. Sum up the information from the text and speak about the component parts of agricultural machines.

(A, B) Exercise 3. Complete the table using the information from the text.

| <i>Farm machinery</i> | <i>Agricultural operations performed by farm machinery</i> | <i>Component parts of farm machinery</i> | <i>Functions of component parts</i> |
|-----------------------|--|--|-------------------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Speak about the main component parts of machine using the table.

(A, B) Exercise 4. Complete the table using the information from the text. Speak about the main components of machines using the table.

| <i>Component parts of machines</i> | <i>verbs</i> | <i>adjectives</i> | <i>connectors</i> |
|--|---|--|-----------------------------------|
| Bolts, washers, screws, nuts, sprockets, pulleys, keys, pins | To classify To construct To hold To use To fasten | Great Right-hand Left-hand Different Several Cylindrical Conical | For example I.e. As well as |
| Bearings | To hold To divide To have | | Such as Also |

| | | | |
|---------------------|---|-------------------|------------------------|
| Engine | To produce To burn To have | | Due to By |
| Transmission system | To transmit To operate To permit To bring about To alter To rotate | Necessary Rear | Such as |
| Hydraulic system | To transmit To convert To determine | Useful | Finally Which Or |

(A, B, C) Exercise 5. Give a gist of the text using the boxes 1 and 2. Give a detailed description using the boxes below.

1. Main idea

| |
|---|
| Farm machinery has many component parts |
|---|

2. Major details

| | | | | |
|--------------------------------------|---|-------------------|---------------------------|------------------------|
| They are used to hold machines parts | They are required to hold parts in position | It produces power | They are the necessary... | This is a method of... |
|--------------------------------------|---|-------------------|---------------------------|------------------------|

3. Minor details

| | | | | | | | | | | | |
|--------|-----------------------|---------|--------|--------|----------|--------|--------|--------|--------|--------|--------|
| 1) ... | 2) in connection with | 1) into | 2) ... | 1) ... | 2) burns | 1) ... | 2) ... | 3) ... | 1) ... | 2) ... | 3) ... |
|--------|-----------------------|---------|--------|--------|----------|--------|--------|--------|--------|--------|--------|

(A, B, C) Exercise 6. Provide the answers to the following questions.

- 1) What component parts are used in the construction of farm machinery?
- 2) How are most bolts classified?
- 3) Where are washers used?
- 4) What is the function of keys?
- 5) What component plays an important part in the operation of farm machinery?
- 6) What is the function of a cam?
- 7) Where are bearings required?
- 8) What types of bearings do you know?
- 9) What is the difference between sliding bearings and rolling bearings?
- 10) How is the power produced?
- 11) Why can a machine accomplish a work?
- 12) What is a transmission system? What is it used for?
- 13) What are the main components of a transmission system? Describe each component of a transmission system.
- 14) What types of clutches do you know?
- 15) What method is called a hydraulic system?
- 16) What parts does it contain?
- 17) How is the power transmitted to a machine?

ДОПОЛНИТЕЛЬНЫЕ ТЕКСТЫ (С, D)

ТЕКСТ С (Понимание основных фактов, содержащихся в тексте).

(A, B, C) Exercise 1. Before reading the text “Tractors” agree or disagree with the following statements.

- 1) Tractor is one of the main machines on the farm.
- 2) The maximum horse power of a tractor is from 10 to 20 h.p. today.
- 3) Air-conditioned cabs are fitted to the tractor.
- 4) A standard tractor has four wheels.
- 5) Crawlers are more expensive than wheeled tractors.
- 6) Wheeled tractors are much more difficult to maintain than track-laying tractors.
- 7) Crawlers can perform transport works.

TRACTORS

The internal combustion engine brought major changes to agriculture in most of the world. The first successful gasoline tractor was built in the United States in 1892. Within a few years several companies were manufacturing tractors in Germany, the United Kingdom and the United States.

Major changes in tractor design throughout the century have produced a much more efficient and useful machine. Principle among these were the power take off, introduced in 1918, in which power from the tractor's engine could be transmitted directly to an implement through the use of a special shaft; all-purpose or tricycle-type tractor (1924), which enabled farmers to cultivate planted crops mechanically; rubber tires (1932), which facilitated faster operating speeds; and the switch to four-wheel drives and diesel power in the 1950s and 1960s, which greatly increased the tractor's pulling power.

The last innovations have led to the development of enormous tractors usually having double tires on each wheel and enclosed, air-conditioned cabs—that can pull several gangs of plows.

In agriculture tractors find their use in the wide variety of farm jobs such as ploughing, disking, planting, cultivating, fertilizing, harvesting, transport works and running machinery off the PTO shaft.

Tractors occupy an important place on the farm as a source of power. On many farms they together with truck or trailers, have entirely displaced horses for farm work. Advantage of tractors power over the horse is that tractor can be used continuously for heavy work. In addition to pulling implements like ploughs and cultivators, a tractor may be used with implements for bush-cleaning, ditch-filling and land-levelling. Small tractors from 1 to 10 horse power, fitted with single- or twin cylinder petrol engines, may be used for garden and orchard work.

Farm tractors may be divided into two groups: wheeled and track-laying. Wheeled tractors may be subdivided into standard and row-crop types. Standard wheeled tractors are used for general work and do not have the special features associated with row-crop tractors. Row-crop tractors can be used for all ordinary purposes, but in addition they are specially designed for working on root and other row crops.

Track-laying tractors or crawlers have the great advantage that they can be used for heavy loads on almost any class of land. They are considerably more economical in fuel than are wheel machines, but their greater initial cost and their maintenance particularly that of the tracks, may outweigh this advantage. The crawler is, however, the more efficient type of tractor and, moreover, can go on the land earlier after rain and so can work a greater number of days per year.

(A, B) Exercise 2. Read the first sentences of each paragraph and name the problems that will be discussed in each of them.

(A) Exercise 3. Choose the best endings to the following statements.

1. The internal combustion engine brought major changes to ... in most of the world.
 - a) industry
 - b) education
 - c) agriculture
2. The first gasoline tractor was built ...
 - a) in Germany in 1892
 - b) in the USA in 1892
 - c) in the United Kingdom in 1982

3. In 1918 ... was introduced.
- the clutch
 - the crankshaft
 - the power take off
4. Tractors are used in agriculture in the wide variety of farm jobs such as ...
- buying , advertising and selling
 - making measurements, testing and operating
 - planting, cultivating and transport works
5. Small tractors can be used for ...
- garden work
 - orchard work
 - garden and orchard work
6. Row-crop tractors are specially designed ...
- for working on root crops
 - for all ordinary purposes
 - for all ordinary purposes and on root and other row crops
7. Track-laying tractors can be used for heavy loads ...
- on almost any class of land
 - on over moistened soils
 - on sandy soils

(A) Exercise 4. In what paragraphs can you find the following information about.

- The variety of farm jobs performed by the tractor paragraph-
- The crawlers paragraph-
- The introduction of the power-take- off in tractor's design paragraph-
- The row-crop tractors paragraph-

e) The invention of the all-purpose tractors paragraph-

(A) Exercise 5. Give the English equivalents for the following Russian word combinations.

- двигатель внутреннего сгорания
- эффективная и полезная машина
- универсальный трактор
- резиновые шины
- кабина с установкой для кондиционирования воздуха
- колесные тракторы
- вал отбора мощности
- колесные и гусеничные тракторы
- последние новшества

(A) Exercise 6. Match the words on the right (A) with their verbs on the left.

| A | B |
|-----------------------------------|------------------------------|
| 1) tractor | a) to be displaced |
| 2) power | b) to be done |
| 3) crops | c) to work on root |
| 4) several plows | d) to be transmitted |
| 5) horses | e) to be used for garden |
| 6) disking, planting, cultivating | f) to be used for heavy work |
| 7) wheeled tractors | g) to pull |
| 8) row-crop tractors | h) to be cultivated |
| 9) crawlers | i) to be subdivided |
| 10) small tractors | j) to be built |

(A) Exercise 7. Write down the gist of the text with the help of the following phrases.

- the first tractor
- innovations in the design of the tractor
- tractor on modern farm

(A, B) Exercise 8. What facts are these dates connected with?

1892
1918
1924
1932
1950-1960

(A, B, C) Exercise 9. Write down key words, phrases and topic sentences which best express the general meaning of each paragraph.

(A, B, C) Exercise 10. Answer the following questions.

- 1) When did the first gasoline tractor appear?
- 2) Did the first tractor survive many changes in its design? What are they?
- 3) Where are modern tractors used now? Why can they perform these kinds of farm jobs?
- 4) What groups of tractors do you know?

(A, B, C) Exercise 11. State the problems that are discussed in the text.

(A, B, C) Exercise 12. What words/ideas would you associate with the notion "Tractor"?

(B, C) Exercise 13. What facts in the text were quite new and were already known to you.

(B, C) Exercise 14. Find information in the text to prove that...

- the appearance of the first tractor is connected with the internal combustion engine
- major changes in tractor design have produced more efficient and useful machine
- tractors displaced horses for farm work
- there is a difference between standard wheeled tractors and row-crop tractors
- there is a difference between wheeled tractors and crawlers.

(B, C) Exercise 15. Exclude some detailed information and write down the annotation of the text.

(C) Exercise 16. Paraphrase.

- 1) The first successful **gasoline** tractor **was built** in the USA.
- 2) The last **innovations** have led to the development of enormous tractors that can pull **several** gangs of plows.
- 3) In agriculture tractors find their use in the wide **variety** of farm jobs.
- 4) Farm tractors may be divided into two **groups**: wheeled and track-laying.
- 5) The crawler is, however, the more efficient **type** of tractor.

(C) Exercise 17. Complete the information from the text by adding your own facts.

(C) Exercise 18. Write your own opinion how to improve a tractor.

Before your reading the text say what words/ideas would you associate with the notion "Maintenance and repair".

ТЕКСТ D Farm machinery maintenance and repair (поисковое чтение)

I

Maintenance of cultivating machinery depends on the type of implement. Cultivators are not complicated implements and maintenance will consist mainly of replacing or reversing the points. If a cultivator is fitted with wheels, the wheel bearings will require daily lubrication. Lubrication is needed because of friction. Lubrication tends to reduce friction.

Lubricants are available in three forms: fluid oils, semisolids and solids. Engine oils and gear oils are fluid oils. They are used for lubricating transmissions and gearboxes. Semisolids include the soft greases, such as bearing grease. Universal oils are produced to serve all types of tractors and implements.

As to the maintenance of a plough it will consist of lubrication. Some lubrication points will require oil lubrication and some will require grease. Replacement of ploughshares will be necessary as work proceeds. At the end of the season's work moldboards and disc coulters should be coated with an anti-rust preparation. So the type of maintenance done to the ploughs depends on the type of the implement.

Maintenance of fertilizing equipment is also necessary. As to a manure spreader its maintenance is no less important than it is to any other

farm machinery. The acids in the manure attack the metal parts of the machine. It is important to clean it when it is not to be used for a long period. Manure spreaders usually have a number of chain drives that have to be kept properly tensioned. The chains and sprockets will require correct lubrication. Fertilizers are very corrosive to metals. At the end of a day's work the fertilizer hopper should be emptied. At the end of a season's work, thorough cleaning of the whole machine is required. In spraying equipment the sprayer pump requires daily attention when the sprayer is in use. A sprayer operator is likely to have to remove nozzles and filters for cleaning.

Harvesting equipment have to receive good maintenance. It has a heavy job to do and there are many mechanisms on it that require regular attention. The lubrication is divided into points that require daily, weekly and annual attention. At the end of the harvesting season it should be given a thorough clean down and servicing before it is put into storage.

The internal combustion engine burns its fuel inside the cylinder to produce power. It is important that the engine does not overheat, but it is equally important that the engine does not run too cool. The majority of tractor engines are water-cooled. This is a more effective method for a multi-cylinder engine. A water cooled engine which has to stand or operate in temperatures of freezing point and below must have an anti-freeze solution mixed with the water. This will prevent damage to the radiator and engine. It is necessary to use the correct amount of anti-freeze so that adequate protection is given to the cooling system.

II

Agricultural implements and machines are so constructed that they may be kept in good working order by systematic checking and making the necessary adjustments, replacements and repairs. Day-to-day maintenance and repair activities keep farm machinery and vehicles safe and reliable. Maintenance activities include oil and filter changes, battery replacement, and repairs including light metal machining.

Potential wastes generated as a result of farm machinery and vehicle maintenance and repair activities can include used oil, spent fluids, spent batteries, asbestos brake pads and linings, metal machining wastes, spent organic solvents, and tires. These wastes have the potential to be released to the environment if not handled properly, stored in secure areas with secondary containment, and protected from exposure to weather.

The impact of oil changes can be minimized by preventing releases of used oil to the environment, and recycling or reusing used oil whenever possible.

Farm machinery and vehicles require regular changing of fluids, including oil, coolant, and others. To minimize releases to the environment these fluids should be drained and replaced in areas where there are no connections to storm drains or municipal sewers.

Farm operators have three options for managing used batteries: recycling through a supplier, recycling directly through a battery reclamation facility or direct disposal.

The major hazardous wastes from metal machining are waste cutting oils, spent machine coolant and degreasing solvents. Material substitution and recycling are the two best means to reduce the volume of these wastes.

III

Equipment maintenance and repair is necessary to avoid down time and to minimize major repairs. However maintaining and repairing machines can lead to serious injury. Workers should be trained in shops safety and have the proper equipment to minimize or even eliminate the impact of shop accidents. To prevent injuries when repairing machines we have to:

1. Develop safe work areas, good habits and establish good housekeeping practices.
2. Train workers.
3. Maintain machinery properly and promptly when repairs are needed.
4. Slow down and take time to think. Visualize what steps need to be taken. Do not rush a job.
5. Wear proper clothing and protective gear.
6. Lift objects correctly.
7. Have a hazard-free shop. A well-lit, clean work bench and work area, along with a regular cleaning schedule of the shop area, will go a long way in eliminating hazards.
8. Isolate hazardous work areas. Have a proper storage area for paints, pesticides and oily rags.
9. Be aware of common safety hazards. Take the time to look where you are going: not only ahead, but behind, to the side and above.
10. Keep shields and guards in place.
11. Turn off the machine when working on it.
12. Use ladders properly.

(A, B, C) Exercise 1. Read the first part of the text and say what questions are discussed in it.

(A, B, C) Exercise 2. Read the second part of the text to say what problems are raised in it.

(A, B, C) Exercise 3. Point out the part/parts about the prevention of injuries when you are in a work shop.

(A) Exercise 4. Are these questions discussed in the first part of the text: (Yes / No)

- 1) Maintenance of primary tillage equipment;
- 2) Maintenance of secondary tillage equipment;
- 3) Repair of the engine;

In the second part of the text:

- 1) Repair activities of agricultural implements and machines;
- 2) Maintenance activities of agricultural implements and machines;
- 3) Farm machinery maintenance and environmental protection;

In the third part of the text:

- 1) The impact of shop accidents;
- 2) Maintenance and repair danger;
- 3) The accidents happened while doing farm machinery maintenance and repair.

(A, B) Exercise 5. Skim through the text and place each part under one of the following headlines.

1. Fertilizing equipment maintenance.
2. Managing used batteries.
3. Oil changes.
4. Developing good habits.
5. Wearing proper clothing.
6. Cleaning work area.
7. Three forms of lubricants.
8. Using the correct amount of anti-freeze.
9. The maintenance of manure spreaders.

10. Storing the wastes in secure areas.

(A, B, C) Exercise 6. Look through the three parts of this text to say how they are connected and why.

(A, B, C) Exercise 7. Entitle every part of the text.

(A, B, C) Exercise 8. The text makes suggestions about different preventive measures when repairing machines. Discuss the following. Give your reasons.

- 1) We must have trained workers.
- 2) We must have time to think before performing a job.
- 3) We must have good habits when doing some repairing work.

(A, B, C) Exercise 9. Comment on the following statements.

- 1) Agricultural implements and machines need day-to-day maintenance and repair activities.
- 2) Farm machinery maintenance and repair may result in environmental pollution.
- 3) There are many means to reduce the volume of environmental pollution.

(A, B, C) Exercise 10. Write what you have learned from the text about:

- 1) The necessity of day-to-day maintenance for all types of farm machinery.
- 2) The maintenance activities and potential wastes generated as a result of farm machinery and vehicle maintenance.
- 3) The measures to be taken to prevent injuries.

(A, B, C) Exercise 11. Have a look back at the text and write out from it the words connected with maintenance and repair of farm machines. These can be used later in your written production.

(A, B, C) Exercise 12. Complete 3 sentences with appropriate statements using the information from the text:

Maintenance of farm machinery depends on the type of an implement being repaired.

- a)
- b)
- c)
- d)

Maintenance activities include:

- a)
- b)
- c)
- d)

Workers should be trained in shops safety and have to:

- a)
- b)
- c)
- d)

(A, B, C) Exercise 13. Write the abstract of the text.

(B, C) Exercise 14. What do you think the answer to the following questions should be? Give your reasons.

Can we avoid repairing? Why is farm machinery maintenance necessary?

(B, C) Exercise 15. Comment on the text. Tell the group what information might be interesting and useful to you as a future engineer.

(C) Exercise 16. Give the reasons to convince your friend to have daily, weekly and annual farm machinery maintenance.

(C) Exercise 17. Write an article based on the information from this text which sets out clearly all the possible arguments regarding farm machinery maintenance and repair, its necessity to minimize losts and major repairs. Conclude the article by outlining your own position and explaining the reason for this.

Grammar Revision

Методические рекомендации

Для того чтобы правильно выполнить задания раздела Grammar Revision, вам необходимо повторить (или изучить) и усвоить материал по указанным темам грамматики, опираясь на школьные знания грамматики английского языка и справочный материал, представленный в разделе 1 данной темы.

Следующие тренировочные задания распределены по трем уровням сложности (A, B, C), что помогает проверить и оценить глубину и качество усвоения материала.

Максимальная оценка знаний на первом уровне (A) – 6 баллов, на втором (B) – 8 баллов, на третьем (C) – 10 баллов.

The Infinitive

(A) Exercise 1. Find out the infinitives in these sentences. Translate the sentences.

- 1) Engineers must know the best and most economical materials to use.
- 2) To design new machines is the task of a mechanical engineer.
- 3) For the computer system to operate, computer programs are required.
- 4) These programs can be easily changed according to the needs of the user.
- 5) Many students go to work to different parts of the country in summer.
- 6) Next summer I will work as a tractor driver.
- 7) To harvest we need many agricultural implements.
- 8) The soil is bad to cultivate.
- 9) The new fertilizers to be used next year will be better.
- 10) Electric motors are used to irrigate the soil.

(A) Exercise 2. Complete the table with the appropriate form of the infinitive.

| Tense form | Active voice | Passive voice |
|-------------------|---|---------------|
| <i>Simple</i> | To supply, to apply, to increase, to produce, to harvest, to plow, to thresh, to till, to mount, to improve | |
| <i>Continuous</i> | | |
| <i>Perfect</i> | | |

(A) Exercise 3. Find out the incorrect form of the infinitive. Translate the sentences.

- 1) We decided *to get/ get* our education at the Belarusian State Agrarian Technical University.
- 2) Agriculture can *provide/ to provide* us with many products.
- 3) Using the Internet farmers may *use/ to use* of data provided by agricultural colleges or other information centers.
- 4) If I were an engineer I would *to design/ design* tools.
- 5) They prepare students *to do/do* specific jobs.

(A, B) Exercise 4. Make up a sentence. Use various forms of the Infinitive. Translate your sentences.

to visit my close friend from time to time
to be visited by my close friend from time to time
It is nice to have visited you last week
to have been visited by Jack
to be doing such interesting work.
to have been doing this work all these years.

Give your own examples.

(A) Exercise 5. Rewrite these sentences using Perfect infinitives.

- 1) I'm glad I've met you.
- 2) I was sorry I had disturbed you.
- 3) I expect I'll have passed all my exams by June.
- 4) It seems that you made a mistake. (You seem...)
- 5) I'm happy that I've had a chance to talk to you.
- 6) I was disappointed that I had missed the party.
- 7) It seems that she's got lost.
- 8) She was pleased that she had found the house.

(A) Exercise 6. Change the sentences as show.

**1) I couldn't understand the timetable. (wasn't able)
I wasn't able to understand the timetable.**

- 2) It's important to eat enough. (you should)
- 3) I'd like to go sailing this summer. (I might)

- 4) She will probably get married in June. (She expect)
- 5) I said I would help her. (I agreed)
- 6) It's necessary to make careful plans. (we must)
- 7) Perhaps he's ill. (He seems)
- 8) I want to change my job. (I wish I could)
- 9) I may come and see you next week. (I hope)
- 10) You don't need to apologize. (You needn't)
- 11) They will open a new branch in North London. (They have decided)
- 12) I will certainly pay you on Saturday. (I promise)
- 13) I couldn't find the ticket office. (I didn't manage)
- 14) I prefer to go by myself. (I would rather)
- 15) She said she wouldn't see him again. (She refuse)
- 16) I can play chess. (I've learnt)

(A) Exercise 7. Point out the purpose of the objects according to the model.

Example:

A: This paper describes important properties of new engineering materials.

B: *The purpose* (aim, goal, object) of this paper *is to describe* properties of new materials.

1. His report presents some information on the new fuel system.
2. The filter is used to clean petrol.
3. The speedometer is used to indicate the speed of a car.
4. This book gives the description of agricultural implements and machines.
5. Agricultural machines were invented to replace manual labour.

(A) Exercise 8. Paraphrase the sentences according to the model.

Example:

It is important to find the necessary information.
To find the necessary information is important.

- 1) It is impossible to store gas in an open tank.
- 2) It is quite necessary to apply organic fertilizers.
- 3) It is very essential to use farm machinery.
- 4) It is unnecessary to mix these substances.

- 5) It is easy to follow these instructions.
- 6) It is difficult to improve the physical condition of the soil.
- 7) It is desirable to destroy weeds.
- 8) It is possible to couple the plow directly to the tractor.
- 9) It is important to prepare a suitable seedbed.

(B) Exercise 9. Read the sentences of the exercise 1. and analyze the forms of infinitives and their functions.

(B) Exercise 10. Open the brackets using the infinitives. Translate the sentences.

- 1) There are good facilities (study) at the university.
- 2) Do you consider these species (grow) for many centuries?
- 3) The chairman ordered the field (plow).
- 4) They must (work) in the garden now.
- 5) They are said (be) at the agricultural exhibition in London last month.
- 6) We know him (work) hard at a very interesting scientific problem.
- 7) Graduates can (work) at joint ventures and banks.
- 8) The work (do) is difficult.

(B) Exercise 11. Can you explain what is wrong with these sentences? Correct them.

- 1) The new irrigation canal to construct here next year will be better.
- 2) A group of students came to the University training farm in Borovlyany practice driving tractors.
- 3) The new method be used in cattle breeding was discussed at the conference.
- 4) This soil is too poor to produced high yields.
- 5) Improve soil fertility farmers must to apply fertilizers.

(C) Exercise 12. Join the following pairs of sentences using the infinitive. What is the function of infinitives in all these sentences?

- 1) The students carry out research work in different student's groups and societies.
They want to be better prepared for work in industry.
- 2) Wind, water and animals were used. They provided energy for various

devices.

- 3) They study a lot of subjects. They want to have a basic knowledge of the sciences.
- 4) Tractors, lorries and other machinery permit it. The time required for agricultural work is reduced.
- 5) A moldboard plow helped the farmers. The farmers used it to eliminate weeds.

(C) Exercise 13. Put the words into the right order to get sentences with the infinitive as a:

a) Subject

Me, gives, to study, at, the Belarusian State Agrarian Technical University, it, pleasure.

b) Adverbial modifier

To increase, they, fertilizers, the quality of, in the yield of the grain, improve.

c) Attribute

To rest, to work, I, a desire, at the University, and, here, have.

d) Predicative

Use of chemicals, cause, to, can, the environment, improper, damage.

e) Object

To operate, is, the implement, easy.

(C) Exercise 14. Group the sentences according to the functions of the Infinitive. Translate the sentences.

- 1) To increase the yields collective farmers must use fertilizers.
- 2) The aim of science and technology is to help make agriculture more productive.
- 3) Agriculture uses areas of land to produce food, clothing, shelter.
- 4) All farms have to introduce better crop rotation systems.
- 5) To develop a new method of plowing was necessary.
- 6) The earliest efforts of people were to lift themselves from primitive cultures.
- 7) Agricultural enterprises are able to obtain high yields of crops.

- 8) The purpose of computers is to help farmers in some farm operations.
- 9) To practice driving cars, tractors, lorries and other machinery is very important.
- 10) Another factor for the agricultural engineer to consider is whether each process can be automated in whole or in part.

(C) Exercise 15. Being a student of the Belarusian State Agrarian Technical University, say what facilities you have at the university using the model.

Model A: I have the possibility to practice driving a car.

Model B: I can practice driving a car.

**What functions do the infinitives have in these sentences?
Say what facilities you do not have and what you would have.**

(C) Exercise 16. Explain why people do the following things. Give as many reasons as you can.

Example:

Why do you use calculators?

We use calculators (*in order*) *to count* quicker, *to avoid* mistakes, *to save* time, etc.

- 1) Why do people need computers?
- 2) Why does everybody want a car?
- 3) Why are we using solar energy nowadays?
- 4) Why have engineers created robots?
- 5) Why do you practice in the lab?
- 6) Why do farmers apply lime?
- 7) Why are fertilizers applied to the soil?
- 8) Why do people cultivate lands?
- 9) Why do farmers all over the world breed animals?
- 10) Why do farmers grow various kinds of crops?

(C) Exercise 17. Translate into English using the Infinitive.

- 1) Обрабатывать этот участок (земли) очень трудно.
- 2) Чтобы повысить урожай, нужно применять удобрения.
- 3) Этот механизм слишком устарел, чтобы его использовать.

- 4) Очень важно использовать современное оборудование в сельском хозяйстве.
- 5) Задача хозяйства заключается в том, чтобы механизировать большинство сельскохозяйственных процессов.
- 6) Важно орошать этот участок земли.
- 7) Мы говорили о новой ферме, которая должна быть построена в следующем году.

The Complex Object

(A) Exercise 1. Translate the sentences paying special attention to the use of the Complex Object.

- 1) We know plants to provide us with food, clothing, shelter and many other things.
- 2) The farmer wants the crop to be sown earlier this spring.
- 3) They heard the farmer speak about the new crop.
- 4) We believe the new equipment to be used this year.
- 5) I know these fertilizers to be applied regularly.
- 6) They saw the tractor cross the field.
- 7) We can expect new uses of plants to be found.
- 8) We saw him drive the combine-harvester.
- 9) Everybody knows cultivation of plants to be closely connected with man's progress.
- 10) The farmers consider the crops grown in this region to be especially useful.

(A) Exercise 2. Fill in the blanks with the particle "to" where necessary.

- 1) Do you consider these species ... have been grown for many centuries?
- 2) Do you believe people now ... be as dependent on plants as primitive man was?
- 3) The agronomist does not expect the plant... grow under dry conditions.
- 4) You can not make him ... use this machinery on his field
- 5) Let the chief engineer ... know about the problems of your farm.
- 6) They saw the new farm machinery ... be used on this type of soil.
- 7) I did not notice him ... visit the exhibition.

(A) Exercise 3. Which of these sentences contains the Complex Object?

- 1) His aim is to till the soil.
- 2) He wants to till the soil.
- 3) We know that he will till the soil.
- 4) We know him to till the soil.

(A) Exercise 4. Point out which sentence fits to this Russian equivalent.

«Мы хотим, чтобы они механизировали все процессы на ферме».

- 1) We want to mechanize all the processes on the farm.
- 2) We want them to mechanize all the processes on the farm.
- 3) They will mechanize all the processes on the farm.

(A) Exercise 5. Point out which sentence fits to the English equivalent.

«We know the harrow to be used for eliminating weeds».

- 1) Мы знаем об использовании плуга.
- 2) Мы знаем, что плуг используется.
- 3) Мы знаем, что плуг используется для удаления сорняков.
- 4) Мы хотим, чтобы плуг использовался для удаления сорняков

(A) Exercise 6. Match the parts of the sentences.

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| It is the tractor | to be used in cattle breeding |
| We have a good idea | to be solved immediately |
| This farm was the last | to use the most modern farm machinery for livestock breeding |
| This is a chance | to answer this question |
| We have a problem | to finish the construction of a new barn |
| These are the builders | to work on the field |
| One should have someone | to be repaired |
| There are harvesters | to get high yields of potatoes |
| That farm was the first | to plough the soil |
| This is the new method | to increase the production of the farm |

(A) Exercise 7. Paraphrase the following sentences using the Complex Object according to the model.

Model: I don't like it when these fertilizers are not applied regularly.
I don't like *these fertilizers not to be applied* regularly.

- 1) We all believe the crop would be harvested in time.
- 2) I expect the experiment would give good results.
- 3) We think he would become a very qualified specialist in the field of agriculture.
- 4) We dislike it when old cultivation machinery is used on the farm.
- 5) They like it when the farmers have a proper seedbed to provide a good development of the seeds.

(B) Exercise 8. Complete these sentences so that the meaning is similar to the first sentence.

- 1) I was surprised that he was studying at the Belarusian State Agrarian Technical University.
I did not expect ...
- 2) Don't stop him applying fertilizers where soils are deficient.
Let ...
- 3) When you till the soil, it helps you keep the soil loose and free from weeds.
Tillage makes...
- 4) I think several types of cultivators should be used for special crops and conditions.
I want ...
- 5) Don't let him forget to repair the sub-soiler.
Remind ...
- 6) At first I did not want to buy a semi mounted plow but he persuaded me.
He persuaded ...

(B, C) Exercise 9. Complete the questions. Use: "Do you want me to ...?" Or "Would you like me to ...?" With one of the verbs (= any other necessary words).

- 1) Have you got enough harvesting equipment or do you want ...?
- 2) Shall I practice driving combine-harvesters or would you ...?
- 3) Do you know how to use the tractor or would you...?

- 4) Did you hear what seeds are bought or do you...?
- 5) Can you prepare the seedbed now or do...?
- 6) Will you ask the farmer to show you how to use this attachment or do...?

(B) Exercise 10. Use one of the verbs to complete the sentences, translate them into Russian. Find the Complex Object in each sentence.

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| <i>to buy, to give, to be (2), to see, to use, to meet</i> |
|--|

- 1) I know terms work, force, and power ... in mechanical engineering.
- 2) We know the rate of doing work ... in terms of horsepower, often abbreviated hp.
- 3) We know the force ... an effort that results in physical change.
- 4) They would like them ... the latest achievements in farm machinery.
- 5) He would be glad them ... these engineers at the railway station.
- 6) Do you believe modern science ... without modern technology?
- 7) I would like him ... some disc plows for our farm.

(B) Exercise 11. Can you explain what is wrong with these sentences?

- 1) The farmers discussed the tools for mulching and fallowing be used.
- 2) He finds the spike tooth harrow useful in his work.
- 3) They noticed to be bought the new grain drills on the world market.
- 4) We do not believe modern agriculture being without computer.
- 5) Manure spreaders, fertilizer distributors, sprayers let the farmer to apply fertilizers.
- 6) We suppose track-laying tractor has the great advantage.

(B, C) Exercise 12. Find in the text the sentences with the Complex Object. Turn them into the simple ones.

(C) Exercise 13. Translate the sentences into English paying attention to the use of the Complex Object.

- 1) Студенты наблюдали, как ремонтировали комбайн.
- 2) Я знаю, что он квалифицированный инженер.
- 3) Я хочу, чтобы вы поговорили с инженером по охране труда.
- 4) Мы знаем, что он учится на факультете “Технический Сервис”.

- 5) Они считали, что жидкие удобрения не могут использоваться для этих культур.
- 6) Я хочу, чтобы вы получили как можно больше информации о тракторах, выпускаемых в нашей республике.
- 7) Я нахожу, что не легко получить высшее образование.
- 8) Я считаю необходимым использовать отвальный плуг.
- 9) Хорошая уборочная техника значительно ускорила уборку урожая.

The Complex Subject

(A) Exercise 1. Translate the sentences, paying special attention to the use of the Complex Subject.

Model: *These ploughing methods* are considered *to be satisfactory*. Считают, что эти методы плужной обработки удовлетворительны.

- 1) Farm equipment mechanics are considered to maintain, repair and install machines used in agriculture.
- 2) Under these conditions wheat is likely to grow well.
- 3) A harrow is known to be used for leveling the ground.
- 4) He is said to be a good engineer.
- 5) The students are sure to have an opportunity to get professions of a driver, a tractor driver.

(A) Exercise 2. Match the beginnings of the sentences with their ends. Pay attention to the verbs used with the Complex Subject.

- 1) The choice of profession is known to...
- 2) He is sure to...
- 3) Crops are considered to...
- 4) The soil is reported to...
- 5) At present many problems in agriculture are likely to...
- 6) The most modern farm machinery is sure to...
- 7) Improper use of chemicals is certain to...
- 8) Fruit crops are known to...

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| include apples, cherries, plums, pears |
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| be difficult and important |
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| be subdivided into food crops, feed crops and industrial crops |
| be used for crop cultivation |
| enter the BSATU |
| be dangerous and to cause damage |
| be connected with ecology |
| be the basis of agriculture |

(A) Exercise 3. Express the same idea:

a) less categorically

Model: This method gives good results.

This method seems to give good results.

- 1) Applying fertilizers is very efficient.
- 2) The results of the experiment are inaccurate.
- 3) The machine uses force to accomplish something.
- 4) Beet harvesters are available on this farm.

b) more categorically

Model: I believe that he will become a good specialist.

He is sure to become a good specialist.

- 1) I believe that this problem is of vital importance.
- 2) We suppose that tractors will find a wide application.
- 3) We think this new grain-drill will be available on our farm.
- 4) We believe this new machinery to be used.

(A) Exercise 4. Choose the correct translation for the underlined part of the sentence.

- 1) The scientists are said *to be developing* new kinds of wheat and barley.

a) разработали в) разрабатывают

2) They seem *to have improved* previous results.

a) улучшают в) улучшили

3) An experimental farm proves *to have been built* in this region.

a) строится в) была построена

4) The yields of grain crops are estimated *to be increasing*.

a) увеличиваются в) увеличатся

5) The research is reported *to have been carried out* successfully.

a) было проведено в) будет проведено

6) Electric motors are likely *to be used* to run milking machines, irrigation pumps and many other machines.

a) используются в) использовали

(A) Exercise 5. What sentence contains the Complex Subject.

- 1) Their group is to work on a big farm.
- 2) Their group wants to work on a big farm.
- 3) They know that they will work on a big farm.
- 4) Their group is known to work on a big farm.

(A) Exercise 6. Point out the sentence that means the same as: «Говорят, что в их хозяйстве все процессы механизированы».

- 1) We have mechanized all the processes on the farm.
- 2) All the processes on the farm are said to be mechanized.
- 3) They will mechanize all the processes on the farm.

(A) Exercise 7. Find out the sentence containing the Infinitive Perfect. Translate it into Russian.

- 1) The scientists have improved soil fertility.
- 2) The fertility of the soil has been improved.
- 3) The scientists are reported to improve soil fertility.
- 4) The scientists are said to have improved soil fertility.

(A) Exercise 8. Point out the sentence that means the same as: “The farm is supposed to build a new barn for cattle”.

- 1) Новый коровник будет построен на ферме.
- 2) Ферма построит новый коровник.
- 3) Предполагают, что ферма построит новый коровник.

(A) Exercise 9. Paraphrase these two sentences using the Complex Subject.

Model: It is founded that the battery is dead.
The battery is found to be dead.

- 1) It seems that applying organic and mineral fertilizers increase crop yields.
- 2) It is unlikely that engineers will find a solution to the problem quickly.
- 3) We expect this method to offer some advantages.
- 4) He supposes Belarus to belong to the area of so-called unstable farming.
- 5) The car mechanic believes field cultivators to have many advantages.
- 6) They consider the tractor to be the most important machine on the modern farm.
- 7) I believe that he will become a good specialist

(B) Exercise 10. Open the brackets and use the verbs in the correct form.

- 1) Mr. Frolov (to say) to be a good engineer.
- 2) Most of the farms (to suppose) to have mixed crop and livestock farming.
- 3) Farm equipment mechanics (to expect) to replace the worn and broken parts.
- 4) The republic (to know) to be a traditional exporter of agricultural products.
- 5) The engine (to happen) to have the problem.
- 6) A piece of farm equipment (to appear) not to work correctly.
- 7) Tractors, lorries and other machinery (to find) to reduce the time required for agricultural work.

(B) Exercise 11. Translate the words in brackets.

- 1) He is thought (был) a very good engineer.
- 2) The results of the experiment are believed (были) very good.
- 3) The new instrument is expected (поможет) scientists solve many important problems.
- 4) A moldboard plow is known (применили) in the middle of the 18th century.
- 5) Diesels are sure (работают) on rather cheap fuel.
- 6) Agricultural jobs are known (требуют) more intricate agricultural machinery.

(B) Exercise 12. Complete the sentences, using the Complex Subject.

- 1) The farm is known to...
- 2) Vegetables are said to ...
- 3) We expect every student of our department to ...
- 4) The soil is found to...
- 5) The agronomist wants the crop ...
- 6) New uses of plants are expected to...
- 7) The raw material is reported to...

(B, C) Exercise 13. Point out the sentences containing the Complex Subject and translate them into Russian.

- 1) To evaluate the results of the research we will study all the experiments carried on in the laboratory.
- 2) This practice is believed to help raise soil fertility.
- 3) I know these fertilizers to be applied regularly.
- 4) We believe the farmers will be able to use the new equipment this year.
- 5) They are said to finish their work in three months.
- 6) To cultivate the crop one must study its characteristics.
- 7) For people to work better they should be interested in the results of their labour.

(B) Exercise 14. Transform the Complex Object sentences into the Complex Subject ones.

- 1) We expect them to begin harvesting in time.
- 2) They know beef cattle to be more widely distributed throughout the

British Isles than dairy cattle.

- 3) I suppose them to study driving a car and a combine-harvester.
- 4) He believes most farmers in this region to keep pigs and poultry.
- 5) The farmer found the cultivation machinery produced in Belarus to be of good quality.

(B, C) Exercise 15. Find in the text the sentences with the Complex Subject. Turn them into the simple ones.

(C) Exercise 16. Restore the original sentences.

- 1) Max/ to study/theoretical/is believed/mechanics.
- 2) This/ to be/of/is said/ importance/information/utmost.
- 3) The system/pollution-free/is reported/to be.
- 4) Young/are known/professionals/in/specialists/their field/to be.
- 5) Barley/to be grown/in/is reported/cooler/regions.
- 6) Soft/to be/ wheat/is known/for/making/excellent/biscuits.

(C) Exercise 17. Translate the sentences into English using your active vocabulary.

- 1) Известно, что удобрения вносятся в почву в различных формах.
- 2) Сообщается, что ученые скоро разработают новые виды орудий для первичной обработки почвы.
- 3) Похоже, что использование этой модели колесного трактора заинтересует фермеров.
- 4) Считается, что гусеничные тракторы имеют главное преимущество: их можно использовать на любом типе почв.
- 5) Предполагается, что борона предотвращает и удаляет сорняки.

The Objective Participial Construction

(A) Exercise 1. Form Participle II from the verbs given in brackets. Translate the sentences paying attention to the use of the Objective Participial Construction.

- 1) I want the mechanical engineers (to teach) high technologies of plant growing and livestock production.
- 2) We have the results (to obtain) due to their experiment.
- 3) The students consider the graduates of the university (to work) only on the farms of our republic.
- 4) Farm equipment mechanics understand testing equipment (to use) to find out the problem.
- 5) They have the soil fertility (to improve) by the use of mineral fertilizers.

(A) Exercise 2. Form Participle I from the verbs given in brackets. Translate the sentences paying attention to the use of the Objective Participial Construction.

- 1) We noticed rotation systems (to differ) in various areas and under various conditions.
- 2) He watched the students of our department (to work) on the training farm.
- 3) When we entered the classroom, we saw many students (to write) at the tables.
- 4) He was looking at the mower (to make) hay.
- 5) We found them (to finish) the work.

(A) Exercise 3. Read the sentences. Find the Objective-with-the- Present-Participial constructions. Translate the sentences.

- 1) I saw him working in the garden.
- 2) Did you notice anyone waiting for the delegation?
- 3) We watched the students planting apple-trees.
- 4) He found them working on the farm.
- 5) When we entered the auditorium, we saw many students writing at the tables.
- 6) We heard the chief engineer speaking about modern equipment.
- 7) The chairman found the engineers carrying out the analysis of the data

with the help of a computer.

8) They watched the mechanic repairing the engine.

9) I heard the students talking about their summer practice.

10) We felt the sun heating the soil.

(A) Exercise 4. Compose sentences with the Objective Participial Construction. Translate them into Russian.

| | | | |
|-------------|-------|----------------|-----------------------------|
| I | saw | all the plants | repaired |
| We | want | the soil | applying fertilizers |
| She | feel | these machines | being fertile |
| I | heard | the students | talking about their studies |
| The teacher | found | sprayers | watered |

(A) Exercise 5. Say what you saw (heard, noticed, observed, watched, found) these people doing yesterday.

Example: Boris – to explain the way of doing it.

I saw Boris explaining the way of doing it.

| | |
|---|---|
| The engineers | to test new equipment |
| The students | to speak about new farm production |
| The manager | to discuss the delivery |
| The technician | to help the worker |
| The representative | to go on business trip to Moscow |
| The sales representatives | to work with foreign customers |
| The farm machinery maintenance engineer | to make drawings and specifications |
| The labour protection specialist | to develop better materials |
| The engineer for electrification | to know all about the new types of energy |
| The mechanical engineer | to help the farm machinery mechanic |

(A) Exercise 6. Say that you want these things changed.

Model: The device is out of order (to repair)

I would like to have the device repaired.

- 1) The rod weeder has gone wrong (to test).
- 2) The grain drill has been badly produced (to reproduce)
- 3) The crawler is out of order (to repair).
- 4) The dimensions of the store room are badly measured (to measure again).
- 5) The equipment for harvesting is not ready yet (to prepare).
- 6) The tractor is producing a lot of noise (to stop the engine).

(A) Exercise 7. Join the two statements to make one sentence with the Object Participial Construction.

- 1) I see the engineer. The engineer is working at the experiment.
- 2) I see her. She is preparing for a difficult experiment now.
- 3) I see him. He is reading an article on the British educational system.
- 4) I see these two engineers. They are mounting a new electronic system.
- 5) They see us. We are using this technique effectively.

(A) Exercise 8. Transform the following sentences into The Objective Participial Constructions with Participle I.

Model 1: You can see that the tractor is pulling many kinds of farm implements.

You can see the tractor *pulling* many kinds of farm implements.

- 1) He returned and saw that the chief engineer was talking with the sales representatives.
- 2) He found that this student was still taking his exam.
- 3) I could see that tractors, combine harvesters and other equipment were using on the farm.
- 4) She noticed that the engineer was working hard at this problem.
- 5) They saw that the crop was harvesting mechanically.

Model 2: A small book was lying open on the table. (to see)

She saw a small book *lying* open on the table.

- 1) My mother was cooking an oat cake. (to see)
- 2) His father was driving a combine harvester. (to see)
- 3) He was protesting that we use new British agricultural machinery instead of Belarusian one. (to hear)
- 4) They were adding fertilizers to the soil to meet the plant food needs. (to see)
- 5) The agronomist was making soil tests in order to determine what elements were deficient. (to see)

(A) Exercise 9. Transform the following sentences so as to use Complex Objects with participle II.

Model: When I called on the manager, I found that he had gone.
When I called on the manager, I found him gone.

- 1) When we came to the conference, we found that soil scientists had developed several instruments for measuring the amount of water in the soil.
- 2) We found that the wheat had given good yields in this region.
- 3) He heard that the students had explained the principles of crop production.
- 4) They considered that this scientist had applied advanced methods of research.
- 5) The teacher observed that the student had learned the classification of harvesting machinery.

(B) Exercise 10. Copy the sentences. Find The Objective Participial Constructions. Translate the sentences.

- 1) I made him buy some new moldboard plows and beet cultivators.
- 2) I want the land used for breeding animals.
- 3) I saw him drive the combine harvester.
- 4) We want the agricultural equipment repaired in time.
- 5) They wish the crop yields increased.
- 6) Where did we have the first combine harvester designed?
- 7) He is unlikely to know when the first mechanical corn planter appeared.
- 8) Electric motors are believed to run milking machines.
- 9) We see the farmer having a wide range of tractors gasoline and diesel today.

- 10) We want Belarusian agricultural products supplied to many countries.

(B) Exercise 11. Find the Object Participial Constructions in these sentences. Translate them.

- 1) When he began to work at the factory he saw the engineers improving this new method of work.
- 2) They wanted the plant developed new types of vehicles.
- 3) He understood his friend dreamed to become a technical engineer.
- 4) We consider the tool engineer designed the tools.
- 5) They found the chemical engineer completed the experiments by the 21st of June.
- 6) We consider these specialists getting an advanced Master's or Doctor's degree.

(B) Exercise 12. Compose sentences with the Objective-with-the-Past-Participial constructions. Translate the sentences.

| | | | |
|-------------|---------------|-------------------|--------------|
| I'd like | to get | the equipment | tested |
| We must | couldn't have | the TV-set | washed |
| They'd like | want | the soil | repaired |
| The Browns | to have | his report | prepared |
| Tom | will get | green save-lights | examined |
| The farmers | have | the car | printed |
| They | wants | these machines | switched off |

(C) Exercise 13. Translate into English the words given in brackets. Use the Object Participial Construction or the Infinitive Complex. Give two variants where possible.

- 1) We consider this country (импортировала) butter, cheese, sugar and some other agricultural products.
- 2) Did anybody hear British farms (занимались) dairy or beef cattle?
- 3) I wanted the farms (обеспечивали) many products from natural fibers to ornamental flowers and trees.
- 4) They found many farmers (выращивали) tobacco.
- 5) They wanted natural fibers (получены) from a variety of plants and animals.

(C) Exercise 14. These two sentences have a different structure but the same meaning. Change the structure of the sentences below so as to keep their meaning unchanged.

- 1) We found that this scientist is investigating new means of production.
- 2) The students assumed that an engineer was to solve practical problems.
- 3) She supposed that the pure scientist was working in the area of applied science and research.
- 4) They understand that the engineer applies his theoretical knowledge to practice.
- 5) I would like to watch how a plow is returning a layer of the soil.
- 6) We consider that harrows belong to the secondary tillage equipment.

The Subjective Participial Construction

(A) Exercise 1. Translate the following sentences paying special attention to The Subjective Participial Construction.

- 1) They were heard discussing new methods of applying fertilizers.
- 2) The engineers were seen showing new types of machinery produced at the plant.
- 3) The student was seen talking with the rector.
- 4) A laser is found producing a powerful beam of light.
- 5) A tractor is found pulling many kinds of implements.
- 6) The plant is known developing new types of vehicles

(A) Exercise 2. Transform the following sentences so as to use The Subjective Participial Construction. Begin your sentences with:

a) The students are seen...:

- 1) The students are driving a car.
- 2) The students are checking equipment.
- 3) The students are testing farm machinery.
- 4) The students are repairing machines used for planting.
- 5) The students are maintaining harvesting machinery.

b) The engineer was seen...:

- 1) The engineer is studying some car devices.
- 2) The engineer is looking at the indications of speedometer.
- 3) The engineer is testing the new device.
- 4) The engineer is measuring the pressure.
- 5) The engineer is controlling the quality of engineering materials.

(A) Exercise 3. Choose the correct form.

- 1) The professors *is/ are* known reporting the results of the tests at the class.
- 2) My group mate *is/are* seen working in the lab.
- 3) They *were/was* seen watching the engine while it was running to find any loose parts or leaks.
- 4) The car *was/were* seen moving.
- 5) The farm equipment mechanics *were/was* seen tuning the engines.

(A) Exercise 4. Answer to the following questions using the model:

Model: What is the driver doing? (to see, to measure the pressure in the wheels).

The driver was seen measuring the pressure in the wheels.

- 1) What are the students doing? (to see, to study a new device in the lab)
- 2) What is your friend doing? (to hear, to describe the results of the test).
- 3) What is he doing? (to see, to work with metal).
- 4) What is engineer doing? (to hear, to carry out an experiment).
- 5) What are the workers doing? (to see, to work in the workshop).

(A) Exercise 5. Transform the following sentences into sentences with The Subjective Participial Construction.

Model: They overheard two people talking about her.

Two people *were overheard talking* about her.

- 1) We heard them mounting a new electronic system.
- 2) They head him using several types of cultivators for special crops.
- 3) The students of our department could see a combine harvester cutting the standing grain.

- 4) The engineers heard a new model of broad-cast planters developing at this farm machinery enterprise.
- 5) They saw the students practicing to drive a car.

(A) Exercise 6. Change the structure of these sentences so as to keep their meaning. Translate them into Russian.

Model: It is known that farmers use many implements for different crops.

Farmers are known using many implements for different crops.

- 1) It is known that farmers apply fertilizers in liquid and gaseous forms.
- 2) It is found that gearbox brings about a speed reduction between engine and rear wheels.
- 3) It is assumed that this machine is widely used in industry.
- 4) It is believed that this group of researchers experiments with a new type of engine.
- 5) It is considered that this scientist applies advanced methods of research.

(B) Exercise 7. Complete these sentences using active vocabulary and the Subjective Participial Construction.

- 1) They were heard...
- 2) The student was seen...
- 3) The problem is known...
- 4) Farm machinery service department is known...
- 5) Mechanics are seen...
- 6) The engine is found...

(B) Exercise 8. Say.

- a) What crops were seen growing when you visited the farm?
- b) What machinery was seen performing ploughing and harvesting?
- c) What machinery was seen performing cultivation and fertilizing?
- d) What machinery was seen performing harrowing and pulling many kinds of other machinery?
- f) What kinds of agricultural works was a farmer seen doing?
- g) What was a mechanic seen repairing?
- h) What a mechanic was seen checking, cleaning, tuning, replacing?

(C) Exercise 9. Translate these sentences into Russian. Pay special attention to the use of the Subjective Participial Construction:

- 1) Мы увидели двух студентов, работающих в мастерской по сварке.
- 2) Они слышали, что их друг учится в Белорусском государственном аграрном техническом университете.
- 3) Известно, что инженеры участвуют в научном эксперименте.
- 4) Известно, что он использует эту технику в растениеводстве и животноводстве.
- 5) Известно, что фермеры применяют органические и химические удобрения.

The Nominative Absolute Participial Construction

(A) Exercise 1. Find the sentence containing the Nominative Absolute Participial Construction. Translate it into Russian.

- 1) Students writing their course papers, their choice depends on the faculty and future specialty.
- 2) Students writing their course papers choose many agricultural problems.
- 3) I know many students writing their course papers.

(A) Exercise 2. Translate the following sentences paying special attention to the use of the Nominative Absolute Participial Construction.

- 1) Fertilizers being used, soil fertility is improved.
- 2) Many crops are grown by this farm, wheat being the most important.
- 3) Rain falling to the land, soil erodes.
- 4) The farm has many large fields, some of them being under potatoes.
- 5) This crop being used for many different purposes, man cultivates it all over the world.
- 6) Many agricultural processes having been mechanized, the work of the farmers became much easier.

(A) Exercise 3. Find out the Nominative Absolute Participial Constructions in each sentence. Explain the difference between these two sentences.

- 1) We have many advanced students, some of them becoming members of the Students' Scientific Society.
- 2) Having many advanced students, they become members of the Students' Scientific Society.

(A) Exercise 4. Point out which sentence fits to this English equivalent.

« Man cultivates many different crops, some of them being used in medicine»

- 1) Человек выращивает много различных культур для использования в медицине.
- 2) Человек выращивает много различных культур, которые он использует в медицине.
- 3) Человек выращивает много различных культур, причем некоторые из них используются в медицине.

(A) Exercise 5. Underline the Nominative Absolute Participial constructions in each sentence and translate them into Russian.

- 1) The error in the calculation having been noticed, we had to verify the results.
- 2) Being asked about the motors, the student mentioned many kinds of them.
- 3) Heat is developed when compressing a gas.
- 4) Having discovered the periodic law of elements Mendeleev made great contribution to world science.

(A) Exercise 6. What participle is used in the Nominative Absolute Participial Construction: participle I or participle II? Translate the sentences into Russian.

- 1) The work finished, the students returned home.
- 2) Pasture grasses growing well here, the farmers breed dairy cattle.
- 3) The plan was discussed in details, many workers taking part in the discussion.

- 4) The sugar beet crop growing well here, many farmers grow it.
- 5) He works on this farm, his brother working here too.

(A) Exercise 7. Read the sentences. Find the Absolute Participial Constructions. Translate the sentences.

- 1) Being used for different purposes, these plants are cultivated in many countries.
- 2) The weather being fine, we went to the country.
- 3) Weather permitting, the farmers will start the sowing.
- 4) The chief agronomist went to a new field, farmers following him.
- 5) Circumstances permitting, the mechanic will start repair without delay.
- 6) Many agricultural processes having been mechanized, the work of the farmers became much easier.
- 7) There are many milking machines on the farm, ten of them being new.
- 8) Man cultivates many different crops, some of them being used in medicine.

(A) Exercise 8. Transform the following sentences so as to use the Nominative Absolute Participial Construction.

Model: When the door bell rang, Ann rose and left the room.
The door bell ringing, Ann rose and left the room.

- 1) When the farmers introduce better crop rotation the yields of the grain and other crops are increased.
- 2) Today's farming is highly developed and intensive as many agricultural processes are mechanized.
- 3) When water and steam were put to work the Industrial Revolution began.
- 4) People began more efficient methods of work and his work became easier.
- 5) As chemicals can cause damage to the environment we have to use them in such a way as not to disturb the biological balance of the soil. After a German engineer Rudolf Diesel invented a new engine known as a diesel a transport revolution in cars, lorries, trains and ships began.

(A) Exercise 9. Split these complex sentences into simple ones using suitable conjunctions. Pay attention to the translation of the Nominative Absolute Participial Construction into Russian.

Model: A hologram is a three-dimensional image, special equipment being necessary to produce it.

A hologram is a three-dimensional image and special equipment is necessary to produce it.

- 1) The experiment being demonstrated, all the students watched it with great attention.
- 2) The professor having delivered the lecture, the students asked many questions to him.
- 3) There being some new grain harvesters on the farm, the collective farmers gathered crop with minimum loss.
- 4) The device being repaired, we could use it for our work.
- 5) The combines being repaired in winter, the farmers got them in time.

(B) Exercise 10. Finish the following sentences with the Nominative Absolute Participial Construction. Use the elements given in brackets.

- 1) The climate of British Isles is ideal for cattle (they, to find, in all areas).
- 2) British agriculture is highly specialized, (cattle, to serve, different purposes in different districts).
- 3) Sheep played an important part in British agriculture (British farmers, to have, a steady export of wool to the continent of Europe).
- 4) (Most farmers, to keep, pigs) pig production occurs in most areas.
- 5) We have a short growing season in Belarus (our country, to belong to, the area of so-called unstable farming).

(B, C) Exercise 11. Find sentences with the Nominative Absolute Participial Construction in the text A. Translate them.

(C) Exercise 12. Translate the contents in the brackets into English using the Nominative Absolute Participial Construction.

- 1) (Так как страна производит большое количество зерновых культур), a large percentage of them is used to feed animals.
- 2) (Так как климат подходит для выращивания льна), the republic is

one of the main producers of flax in the world.

- 3) (Поскольку большая часть населения Великобритании живет и работает в городах), urban areas occupy a small proportion of the total land area.
- 4) Three-quarters of the land area is used for agriculture, (причем остальная часть занята горами и лесами).
- 5) Soft wheat is excellent for making biscuits, (так как хлеб только из мягкой пшеницы более низкого качества).

(C) Exercise 13. Group the sentences: a) with attributive participial construction; b) with adverbial participial construction; c) with nominative absolute participial construction; d) with complex object; f) with subjective participial construction; g) with complex subject; h) with objective participial construction. Translate the sentences.

- 1) A new irrigation system having been built, some water problems were solved.
- 2) The power-station being built on the river will supply electricity to all the farms.
- 3) Sea water containing harmful substances cannot be used for irrigation or drinking purposes.
- 4) Grass, trees and other plants slow the movement of water permitting more water to enter the soil.
- 5) Belarus has sufficient fresh water resources.
- 6) The total amount of salts in sea water varies depending on how warm the water is.
- 7) While teaching farm machinery and equipment he continued his self education.
- 8) The driver having repaired the engine, we could continue our work.
- 9) We want them to design a new model of the tractor.
- 10) A speedometer is known to be a device to measure speed.
- 11) We consider track-laying tractors used for pulling a five or six-furrow plough for heavy cultivation.
- 12) The engineer was seen working out a new model of crawler.

The Gerundial Complex

(A) Exercise 1. Complete the table below to show how the gerund is formed:

| <i>Infinitive</i> | <i>Gerund (indefinite active)</i> | <i>Gerund (indefinite passive)</i> | <i>Gerund (perfect active)</i> | <i>Gerund (perfect passive)</i> |
|-------------------|-----------------------------------|------------------------------------|--------------------------------|---------------------------------|
| сажать | | | | |
| to fasten | | | | |
| сеять | | | | |
| to revolve | | | | |
| дисковать | | | | |
| to break | | | | |
| уплотнять | | | | |
| to convert | | | | |

(A, B) Exercise 2. Translate the following sentences paying special attention to the complexes with the gerund. State the function of the complex.

- 1) He insisted on our using this new type of fertilizers.
- 2) Excuse my asking, but do you study at the Farm Machinery service department?
- 3) I shall feel more comfortable if I can count on your doing this work in time.
- 4) Do you think there is much chance of one seeing him again on our farm?
- 5) We tried different farm machinery before our getting this new model of tractors and now we are very happy.
- 6) Everyone liked the idea of his getting higher education at the Belarusian State Agrarian Technical University.
- 7) They insisted on our visiting this exhibition in Germany.
- 8) It is useless their applying fertilizers on this field: the soil is not good for flax.
- 9) I am against your working because you will have not much time for your studies.

(A) Exercise 3. Use the proper form of the gerund (as the second part of complexes with the gerund) instead of the infinitive in brackets.

- 1) He told me all about his (to visit) the farm, and the questions he had asked.
- 2) She could hear the sound of water (to suck) into dry soil.
- 3) There was no possibility for this student (to study) to drive a combine harvester.
- 4) They saved time by their (to sow) earlier.
- 5) We have to compare these two plants before our (to plant) them.

(A) Exercise 4. Point out the sentence containing the Complex with the gerund and its function.

- 1) Students like asking questions at the lecture.
- 2) We found the error without repeating the experiment.
- 3) After his having worked at the factory for some years he entered the University.

(A) Exercise 5. Point out the sentence containing complex with gerund in the function of "Complex Subject".

- 1) Speaking foreign languages is of great importance for our students.
- 2) Their taking part in the top overhauling of the tractor was very useful for them.
- 3) Has he tried checking the soil?

(A) Exercise 6. Point out the sentence containing the Complex with the gerund in the function of "Complex Object".

- 1) Do you mind the climate control system being inspected by the engineer?
- 2) Recognizing the problem is the first step to its solution.
- 3) Experimenting with lasers is very dangerous.

(A) Exercise 7. Copy the sentences. Underline Infinitive, PI, PII or Gerund. Translate the sentences.

- 1) Liquids and gases expand on heating.
- 2) I bought some frozen vegetables at the supermarket.

- 3) When put into the water the flowers opened their petals.
- 4) We don't intend placing orders for such machines.
- 5) Your working at the plant helps you to know technical subjects better.
- 6) How many years do you have to study to become a qualified engineer?
- 7) We know of Newton's having developed principles of mechanics.
- 8) To operate the complex device is rather difficult.
- 9) The tractor driver has finished to plough the field in the afternoon.
- 10) He will go to the farm to be trained for practical work in agriculture.

(A) Exercise 8. Transform the following sentences so as to use complexes with gerund. Use prepositions where necessary:

Model: 1. Everyone was surprised that she was there.
Everyone was surprised at her being there.

2. She insisted that I should apologize to her.
She insisted on my apologizing to her.

- 1) We know that the students were told about a new wheat variety and climatic conditions of this region.
- 2) I am for that the tractor was examined before its using.
- 3) I remember that we discussed this engineer's experiments with you.
- 4) We were about to suggest that you should visit our farm to see new models of tractors bought in France.
- 5) They insisted that the new method of ploughing would be used on the farm.

(A) Exercise 9. Shorten these sentences but do not change their meanings.

Model: Having made a hologram we drew up a laboratory report
On our making a hologram we drew up a laboratory report.

- 1) Having recognized the problem the scientist tried to find its solution
- 2) Having changed the old machinery we received better results.
- 3) Having invented the diesel we ran many kinds of machines.
- 4) Having studied the features of acoustical system in this tractor our young engineer improved it.
- 5) Having considered all the tractors the engineers changed the whole system.
- 6) Having repaired the tractor the driver began his work in time.

A) Exercise 10. Join two sentences into one. Pay attention to the use of prepositions.

Model: Nitrogen is used in metal industry. We know that.
We know of nitrogen being used in metal industry.

- 1) Most vegetables are planted by seeding in the fields. We are aware of that.
- 2) Many food crops tend to spoil quickly. We are afraid of that.
- 3) Hay balers gather the hay and bind it into bales. I was surprised when I saw it for the first time.
- 4) The students should study the types of agricultural machinery and their characteristics. The professor insists on that.
- 5) We should control pests and disease pathogens. The scientists, technical engineers and farmers recommend that.

(A) Exercise 11. Paraphrase the following questions and let your friend answer them. Use the prepositions where necessary.

Model: Do you mind if I use your computer?
-Do you mind my using your computer?
-No, I don't. You can use it whenever you want.

- 1) Would you mind if they introduce any achievements of science and advanced methods in livestock breeding?
- 2) Do you mind if I make a report on the problems of food supplies?
- 3) Do you insist that we should plough now? (on)
- 4) Do you mind if we apply these fertilizers to the soil during planting?
- 5) Will they object if we use these devices to stir the soil between rows, to uproot and to bury weeds? (to)

(C) Exercise 12. Paraphrase the following questions and let your friend answer them. Use the prepositions where necessary.

Example: - Do you mind if I use your computer?
- Do you mind my using your computer?
- No, I don't. You can use it whenever you want.

- 1) Would you mind if they create a new mechanism?

- 2) Do you mind if I make a report on agricultural problems?
- 3) Do you insist that we should sign the contract? (on)
- 4) Will they object if I use the car without asking for their permission? (to)
- 5) Do you believe that we will restore the ecological balance on the planet? (in)
- 6) Are you sorry that you are late? (for)

(B) Exercise 13. Open the brackets and use the gerund in the Active or Passive Voice.

- 1) Nobody is surprised at his (to receive) a good mark.
- 2) Scientists insist on our (to protect) plants.
- 3) We are against flax (to harvest) too early because the fibers will be fine and silky.
- 4) The student made a report on the effective soil management measures (to take).
- 5) We are for the samples of the soil (to send) to a soil-testing laboratory.

(B) Exercise 14. Insert prepositions (at, of, without, instead of) if it is necessary.

- 1) People get tired ... doing the same work for a long time.
- 2) Agricultural science is worth ... developing.
- 3) What is the use ... creating new machinery?
- 4) Intelligent machines are clever ... performing various tasks.
- 5) You had better check the calculations ... doing another test.
- 6) Quick processing of information is impossible ... applying computers.
- 7) They suggest ... using modern spraying techniques.
- 8) We couldn't help ... telling them about the results of the experiment.
- 9) I don't mind ... staying in the country for another week.
- 10) ... answering my question he asked me his question.

(C) Exercise 15. Correct mistakes in the following sentences.

- 1) You have to avoid your use the pesticides improperly.
- 2) We liked the idea their adding fertilizers to the soil during ploughing and harrowing.
- 3) There is little sense on your using spray mixtures to control some diseases.

- 4) We have many changes on the farm since our used of disease-resistant varieties of cabbage.
- 5) Much depends from our improvement of the microclimatic conditions and soil conditions.

(C) Exercise 16. Translate the sentences into English (using your active vocabulary).

- 1) Извините, что мы не смогли участвовать в студенческой научной конференции.
- 2) Я помню, что преподаватель объяснял это на занятии по предмету «Тракторы и автомобили».
- 3) Я слышал, что он работает на белорусско-немецком совместном предприятии.
- 4) Мы настаивали на том, чтобы использовать удобрения в жидкой форме.
- 5) Он за то, чтобы мы внедряли новые программы для уменьшения болезней скота.

(C) Exercise 17. Complete the following so as to use complexes with the gerund. Use your active vocabulary.

- 1) There was no possibility of...
- 2) They saved time by...
- 3) He liked the idea of...
- 4) I don't like...
- 5) There was an absolute proof of ...

3 ЗАДАНИЯ ПО УСРС И РЕКОМЕНДАЦИИ ПО ИХ ВЫПОЛНЕНИЮ

Темы УСРС: Agricultural Machinery; Engine; Transmission System; Hydraulic System; Lubrication; Cooling System.

Образцы УСРС (А, В)

Task 1. Read the text and do the exercises that follow.

The Ford Company

1. The Ford Company is known to be a technologically advanced manufacturer of vehicles. For many years the Ford Company has been deeply involved in the manufacture of tractors, cars and trucks. Ford tractors enable farmers to work quickly and efficiently.

2. The cab is a comfortable and efficient workplace. Modern acoustic systems have greatly reduced noise levels inside the cab. Transmission controls have been mounted on the flat floor. Individual adjustable halogen work lights have been installed into the cab roof.

3. The driver's seat has been equipped with pneumatic suspension and it turns easily and gives the driver a more comfortable view. Air filtration, efficient heating and ventilation with air-conditioning further enhance comfort and the driver's efficiency. These tractors have also been equipped with climate control filters and anti-burst door locks.

4. Ford tractors have been trusted by generations of farmers due to their high quality.

Task 2. Find information in the text to answer the following questions.

- 1) What is the Ford Company known to produce?
- 2) What is the driver's seat equipped with?
- 3) Why is the cab considered to be a comfortable workplace?

Task 3. Say if these statements are true or false. Correct the false ones.

- 1) The Ford Company produces not only cars but tractors and lorries.
- 2) Modern transmission controls have reduced noise levels.
- 3) The driver's seat turns easily due to the pneumatic suspension.

- 4) Ford cars help farmers to work quickly and efficiently.
- 5) These tractors have also been equipped with work lights.

Task 4. Translation check of the paragraphs 2 and 3. Use the dictionary if necessary.

Task 5. Study the text once more and write the summary (3-4 sentences).

Task 6. Find in the text the sentence with Complex Subject. Translate it into Russian paying attention to the Complex Subject's structure. Turn it into the Complex Object one.

Task 7. You are a sales manager at the Ford Company. Try to make an advertising of a Ford tractor pointing out the main advantages of it.

Task 8. Study the text once more and write a paragraph about the Ford Company. (3-4 sentences).

(B)

Task 1. Read the text attentively for more details about the work of the engine.

Engine

1. An engine produces power by burning air and fuel. The fuel is stored in a fuel tank. The fuel tank is connected to a fuel pipe. The fuel pipe carries the fuel to a fuel pump. The fuel pump is connected to the carburetor. The fuel pump pumps the fuel into the carburetor. In the carburetor the fuel is mixed with air. The fuel and air are drawn into the engine cylinder by the piston. Then the fuel and air are compressed by the piston and ignited by the spark plug. They burn and expand very quickly and push the piston down. Thus the power is produced. The burned fuel and air are expelled from the cylinder by the piston.

2. The flow of gases into and out of the cylinder is controlled by two valves. There is an inlet valve allowing fresh fuel mixture into the cylinder and an exhaust valve which allows the burnt gases to escape. There are two basic engine operating cycles: the four-stroke cycle and the two-stroke cycle.

Task 2. Provide answers to the following questions.

- 1) Where do you know the power to be produced?
- 2) What is the fuel tank?
- 3) What unit is proved to be connected to the carburetor and what is its function?
- 4) Where is the fuel mixed with air?
- 5) What is the function of the piston?
- 6) What part of the engine is considered to control allowing fresh fuel mixture into the cylinder and escaping the burnt gases out of it?

Task 3. Read these gists of the text and find the one which corresponds to the contents best. Add some information (1-2 sentences more) to explain your choice.

- 1) In this text we consider the types of engines and their work.
- 2) This text deals with the two basic operating cycles.
- 3) This text provides information on the principles of the engine operation.
- 4) The text informs us of the engine, its function and principles of operation.

Task 4. Write the annotation of the text.

Task 5. Change the structure of the sentences below so as to keep their meaning unchanged. Use:

The Complex Subject:

- 1) It is found that the fuel pipe carries the fuel to a fuel pump.

The Complex Object:

- 2) We found that the fuel and air are compressed by the piston.

The Objective Participial Construction:

- 3) You heard how the teacher was explaining the principles of the engine operation.

The Subjective Participial Construction:

- 4) We saw that this group of researchers was experimenting with a new diesel engine.

The Nominative Absolute Participial Construction:

- 5) The burnt gases are produced and an exhaust valve is necessary to allow them to escape.

The Gerundial Complex:

- 6) We were about to suggest that you should use the four-stroke cycle engine.

(C)

Task 1. Read the text and do the exercises that follow.

Lubrication of Bearings

The machine tools in a workshop sometimes have their own electric motors, or they may take the power they need from a motor which feeds several machines. The shafts which carry the power from the motor to the machines need some kind of support to keep them steady. We call these supports bearing. There are different types of bearings for different purposes.

The rotating shaft bears on a stationary bush or tube. We therefore have two metal surfaces in close contact with each other, and sliding over each other often at high speed. This will cause friction and the bearing will become heated. So we have to protect the metal surfaces from overheating and damage. We can reduce the danger of overheating by lubrication. We have a thin film of oil between the two metallic surfaces to keep them apart. The internal friction of oil is much less than the friction between two solids, and generates less heat. Lubrication also offers another advantage. A film of oil on the metal surfaces will prevent them from corroding by protecting them from the air. We can use grease in low-speed bearings and oily lubricant for high-speed bearings.

Task 2. Explain:

Why:

- 1) The shafts need some kind of support;
- 2) The bearing can become heated during its work;
- 3) We have to protect bearings from overheating and damage;
- 4) A thin film of oil protects bearings from overheating and damage;
- 5) We have to use different sorts of lubricant for low-speed bearings and for high-speed bearings.

What:

- 1) Supports shafts;
- 2) Can reduce the danger of overheating of bearings;
- 3) Sorts of lubricant are used to prevent overheating and corroding of bearings.

How:

- 1) Shafts carry the power from the motor to the machines;
- 2) The lubrication is done.

Task 3. What branch of engineering does the text refer to?

Task 4. What specialists can the text be of use to?

Task 5. Complete these sentences using some information from the text. Pay attention to the use of Non-Finite Forms of Verbs.

- 1) The internal friction of oil is known to ...
- 2) Lubrication gives the opportunity of...
- 3) A film of oil prevent bearings from corroding because of its ...
- 4) The bearings are certain to...
- 5) The machine tools have their own motors, the power they need ...

Task 6. Write the annotation of the text.

4 ПРИМЕРЫ РАЗНОУРОВНЕВЫХ ЗАДАНИЙ ДЛЯ КОНТРОЛЯ РЕЗУЛЬТАТОВ ИЗУЧЕНИЯ СОДЕРЖАНИЯ ТЕМЫ

Методические рекомендации к разноуровневым контрольным заданиям.

Следующие задания промежуточного контроля знаний предназначены для определения уровня владения изученным лексико-грамматическим материалом по теме. Максимальная оценка знаний на 1 уровне (А) – 6 баллов, на 2 уровне (В) – 8 баллов, на 3 уровне (С) – 10 баллов.

Образец промежуточного теста

Задания необходимо выполнять в том порядке, в каком они даны в тесте. *Exercises 1-4* выполнять в виде ключа. Предложения *Exercise 5* написать полностью.

Exercise 1. Choose the correct form in each sentence.

- 1) The purpose of computers is *help/to help* farmers in some farm operations.
- 2) If I were an engineer I would *to design/design* tools.
- 3) They saw the tractor *to cross/cross* the field.
- 4) I would like these fertilizers *to be applied/ to apply* regularly.
- 5) The republic *knows/is known* to be a traditional exporter of agricultural products.

Exercise 2. Choose the correct word in each sentence.

- 1) Fertilizers in liquid form are applied by *manure spreaders /sprayers*.
- 2) A tractor can pull many kinds of *crops/implements*.
- 3) The secondary tillage equipment used by the farmer includes *harrows/ combine harvesters*.
- 4) *Wheeled tractors /crawlers* are used for general farm work.
- 5) *Planting equipment/ cultivation machinery* is used to place seeds in the soil.

Exercise 3. Put the verbs in brackets into the correct forms. Use participle I or II.

- 1) They have the soil fertility (to improve) by the use of mineral fertilizers.
- 2) He was looking at the mower (to make) hay.
- 3) They were heard (to discuss) new methods of applying fertilizers.
- 4) The students of our department could see a combine harvester (to cut) the standing grain.
- 5) This crop (to use) for many different purposes, man cultivates it all over the world.

Exercise 4. Form the derivatives and complete the sentences.

| |
|---------------------|
| <i>To fertilize</i> |
| <i>To transmit</i> |
| <i>To work</i> |
| <i>To design</i> |
| <i>To speed</i> |

- 1) The rate of doing ... is sometimes given in terms of horsepower.
- 2) Farm chemicals and ... can be applied with accuracy and safety using the High Tech Air Applicator from Willmar.
- 3) Two ... ranges are provided: 0 to 8 km/h for harvesting and 0 to 16 km/h for road use.
- 4) A new model has a specific ...based on a synchromesh four-speed gearbox.
- 5) In this ... the valves are overhead the engine and have a complex design.

Exercise 5. Find the synonyms to the words or word combinations in brackets.

The (1)... (a motor vehicle for pulling farm machinery or other heavy loads) is the most important machine on the farm. There are two main types: wheeled and (2) ... (a machine that moves by means of a track over which it rolls). Wheeled tractors are classified according to the tractive power which they develop at a certain (3)... (a measure of the time in which something moves or happens). The (4) ... (mechanical or electrical energy) is transmitted through various mechanisms to rear (5)... (a round device that turns on a shaft that passes through its centre).

Образец итогового лексико-грамматического теста

Методические рекомендации к разноуровневым контрольным заданиям.

Задания для комплексного тестирования предназначены для определения уровня владения изученным лексико-грамматическим материалом по теме. Максимальный балл при оценке знаний на репродуктивном уровне (A) – 6, на продуктивном (B) -8, на творческом (C) – 10.

Задания необходимо выполнять в виде ключа в том порядке, в каком они даны в тесте.

Exercise 1. Match the columns.

| | |
|--|---|
| 1) The experiments having been carried out, the students started a new series of tests. | a) Complex Object |
| 2) This scientist is considered applying advanced methods of research. | b) Complex Subject |
| 3) The use of the rotary hoe as a cultivator attachment is known to be discussed by the engineers. | c) Subjective Participial Construction |
| 4) We know most power sprayers today to be of the hydraulic type. | d) Gerundial Complex |
| 5) We know of liquid fertilizers being used in high-and low-pressure and no pressure forms. | e) Nominative Absolute Participial Construction |

Exercise 2. Paraphrase by choosing the best form in each sentence.

- 1) Type of agricultural machines used to break down the soil before or after a crop is sown or for covering seeds; (*cultivation machines/ fertilizer distributors*)
- 2) A motor vehicle for pulling farm machinery or other heavy loads; (*engine/tractor*)
- 3) One of the components of the transmission system; (*differential/washer*)
- 4) Maintenance activities applied to the harvesting equipment; (*lubrication/ replacement of ploughshares*)

5) A component part of an agricultural machine that produces power by burning air and fuel. (*engine/gearbox*)

Exercise 3. Open the brackets and use non-finite forms of the verbs (infinitive construction, participial construction, gerundial construction).

- 1) Second-year students are expected (to know) the basics of electricity.
- 2) New data let us (to carry out) another experiment.
- 3) Professor is interested in students (to complete) the research.
- 4) The car (to repair), the driver left the service station.
- 5) We want Belarusian agricultural products (to supply) to many countries.

Exercise 4. Put the following words into the correct sentences. Use each word once only.

| |
|--------------------|
| a) fertilizers |
| b) component parts |
| c) engine |
| d) cooling system |
| e) filters |

- 1) Every mechanical engineering workshop is equipped with machine tools which are the main source for the manufacture of... for all machines and mechanical devices.
- 2) These... help to maintain internal cleanliness of the engine and protect against wear and corrosion.
- 3) Farm chemicals and ... can be applied with accuracy and safety using the High Tech Air Ride Applicator from Willmar.
- 4) Having entered the..., dust and dirt damaged the cylinders, pistons and piston rings.
- 5) The primary job of the ... is to cool the engine and to keep it from overheating.

Exercise 5. Complete these sentences with the right variant in brackets.

The combine harvester is used to harvest all types of grain and 1) ... (seed crops, potatoes, beets). The combine cuts and threshes in one operation. The self-propelled type has the threshing mechanisms powered by 2) ... (power-take-off of a tractor, its own engine, cutting mecha-

nism). All the controls used to operate the combine are known 3) ... (closed to the driver, to be closed to the driver, to be fitted to the combine). An air conditioned cab is used, dust problem 4) ... (being installed, being resolved, to be resolved). Self-propelled combines are made in widths of 5) ... (engine, cut, tractor) ranging from about 1.5 m to 6 m.

5 КЛЮЧИ К ЗАДАНИЯМ ДЛЯ САМОКОНТРОЛЯ И ТЕСТАМ

| | |
|-----|---|
| 5. | a) подлежащее в) часть составного сказуемого с) обстоятельство d) определение е) дополнение |
| 7. | a) Complex Object b) Complex Subject |
| 8. | a) Objective Participial Construction b) Subjective Participial Construction c) Complex Object d) Nominative Absolute Participial Construction |
| 9. | Нам понравилась идея о том, что он расскажет о сельскохозяйственной технике. |
| 10. | a) fertilizing equipment (техника для внесения удобрений) b) harvesting equipment (уборочная техника) с) planting equipment (посадочная техника) |

Ключи к заданиям лексико-грамматического промежуточного теста

| <i>Ex1</i> | <i>Ex2</i> | <i>Ex3</i> | <i>Ex4</i> | <i>Ex5</i> |
|--|--|---|--|--|
| 1)to help 2)design 3) cross 4) to be applied 5) is known | 1) sprayers 2)implements 3) harrows 4) wheeled tractors 5)planting equipment | 1) improved 2) making 3)discussing 4) cutting 5) used | 1) work 2) fertilizers 3) speed 4) design 5)transmission | 1) tractor 2)crawlers 3) speed 4) power 5) wheel |

Ключи к заданиям лексико-грамматического итогового теста

| <i>Ex1</i> | <i>Ex2</i> | <i>Ex3</i> | <i>Ex4</i> | <i>Ex5</i> |
|--------------------------------------|---|--|---|--|
| 1) e 2) c 3) b 4) a 5) d | 1)cultivation machinery 2) tractor 3)differential 4)lubrication 5) engine | 1)) to know 2) carry out 3)completing 4) having been re-paired 5) to be supplied (supplied) | 1)component parts 2) filters 3) fertilizers 4) engine 5) cooling system | 1) seed crops 2) its own engine 3) to be closed to the driver 4) being resolved 5) cut |

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