TOMSK POLYTECHNIC UNIVERSITY

Vera V. Golubeva

GRAMMAR OF MODERN ENGLISH

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МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ Федеральное государственное бюджетное образовательное учреждение высшего профессионального образования «НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ ТОМСКИЙ ПОЛИТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ»

В.В. Голубева

ГРАММАТИКА СОВРЕМЕННОГО АНГЛИЙСКОГО ЯЗЫКА

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Пособие нацелено на совершенствование грамматических умений и навыков в устной и письменной форме. Содержит следующие разделы: «Grammar of Oral and Written Texts», «The Use of the Passive Voice in Oral and Written Speech», «Reported Speech», «Conditionals» и «The Non-Finite Forms of the Verb (Verbals)», каждый из которых имеет определенное методическое назначение. В каждом разделе предлагаются задания, направленные на развитие коммуникативной компетенции.

Адресовано преподавателям нелингвистических специальностей, обучающимся в системе послевузовской подготовки по специальности «Английский язык в научных и инженерных целях», а также может быть использовано студентами и слушателями языковых курсов.

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Рецензенты

Кандидат филологических наук, доцент кафедры лингвистики ТГПУ И.Е. Козлова

Кандидат филологических наук, доцент кафедры английского языка ТГПУ Я.А. Глухий

Кандидат исторических наук, старший преподаватель кафедры МПИЯ НИ ТПУ *К.П. Черемисина*

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UNIT I. GRAMMAR OF ORAL AND WRITTEN TEXTS

Questions for Discussion:

- > What peculiarities of oral speech do you know?
- > What peculiarities of written speech do you know?
- > What peculiarities of the scientific style of speech do you know?

Task I: Look at the peculiarities in the list below and put them into the right column. One peculiarity may be put into both columns.

- elliptical sentences
- the omission of the conjunctions
- terms
- non-elliptical sentences
- impersonality
- contractions
- passive constructions
- clichés
- direct word order
- emotionality
- impersonal constructions
- expressiveness

Table 1

Oral Speech	Scientific Style of Speech

Task II: Read the information about the peculiarities of the scientific style of speech.

The Peculiarities of the Scientific Style of Speech

A.

1. Sentences may range from 7 to 52 words.

- 2. Sentences should be well-formed, their structure should be simple.
- 3. Sentences should be non-elliptical, i.e. each sentence should have a subject and a predicate.
- 4. Do not use contractions in scientific papers.
- 5. Extended complex and compound sentences should be used without the omission of conjunctions. In oral speech conjunctions are often omitted, e.g. He claimed, the equipment had been received, while in written speech they should be used, e.g. He claimed *that* the equipment had been received.

В.	

- 1. The characteristic feature of scientific prose style is the use of typically bookish syntactic structures for example, the compound type of the predicate. E.g. These pumps *are known to offer* high quality and reliability and incur low maintenance costs.
- 2. The use of bookish syntactic constructions with non-finite forms of the verb (infinitive, participles and gerund). E.g. These gases are easy to control but they are persistent *once omitted*.

C.

1. The Past Tenses are used to report results; the Present Tenses are used for discussions and conclusions. E.g. Smith (1989) *reported* a similar result. The characteristics of the voltammetric wave *indicate* that electron transfer and breaking of the carboniodine bond are concerted.

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

Tense Peculiarities Lexical Peculiarities Syntactical Peculiarities Grammatical Peculiarities

Task IV: Choose the correct answer to the following questions:

- 1. Which of the two sentences is structurally awkward for the scientific style of speech?
 - a. The identification wasn't confirmed by mass spectrometry.
 - b. The identification was not confirmed by mass spectrometry.

- 2. Are some bookish constructions used in scientific prose style?
 - a. yes
 - b. no

Task V. Read the abstracts from scientific articles and describe their grammatical peculiarities.

1. Phase-change materials undergo rapid and reversible crystallineto-amorphous structural transformation and are being used for nonvolatile memory devices. However, the transformation mechanism remains poorly understood. We have studied the effect of electrical pulses on the crystalline-to-amorphous phase change in a single-crystalline Ge₂Sb₂Te₅ (GST) nanowire memory device by in situ transmission electron microscopy. We show that electrical pulses produce dislocations in crystalline GST, which become mobile and glide in the direction of hole-carrier motion. The continuous increase in the density of dislocations moving unidirectionally in the material leads to dislocation jamming, which eventually induces the crystalline-to-amorphous phase change with a sharp interface spanning the entire nanowire cross section. The dislocation-templated amorphization explains the large on/off resistance ratio of the device.

(from Ham S.-W. et al. Electrical Wind Force–Driven and Dislocation-Templated Amorphization in Phase-Change Nanowires // Science, *Vol. 336, No. 6088. – P.* 1561–1566)

2. Most plants obtain nitrogen through nitrogen-fixing bacteria and microbial decomposition of plant and animal material. Many vascular plants are able to form close symbiotic associations with endophytic fungi. Metarhizium is a common plant endophyte found in a large number of ecosystems. This abundant soil fungus is also a pathogen to a large number of insects, which are a source of nitrogen. It is possible that the endophytic capability and insect pathogenicity of Metarhizium are coupled to provide an active method of nitrogen transfer to plant hosts via fungal mycelia. We used soil microcosms to test the ability of *M. robertsii* to translocate insect-derived nitrogen to plants. Insects were injected with ¹⁵N-labeled nitrogen, and we tracked the incorporation of ¹⁵N into amino acids in two plant species, haricot bean (Phaseolus vulgaris) and switchgrass (Panicum virgatum), in the presence of M. robertsii. These findings are evidence that active nitrogen acquisition by plants in this tripartite interaction may play a larger role in soil nitrogen cycling than previously thought.

(from Behie S.W. et al. Endophytic Insect-Parasitic Fungi Translocate Nitrogen Directly from Insects to Plants // Science, *Vol. 336, No. 6088. – P.* 1576–1577)

3. Since the discovery of the first recurrent mutations in oncogenes and tumor suppressor genes, it has been clear that cancer is, in large part, a genetic disease. Yet nearly every human neoplasm retains a phenotype reflective of its tissue of origin, thus underscoring the centrality of epigenetics in cancer biology. Indeed, there is increasing recognition that transmissible epigenetic changes – chemical modifications to the genome or its scaffold that do not involve a change in the nucleotide sequence – may be acquired de novo, and that these "epimutations" may also contribute to carcinogenesis. Aberrations of DNA methylation have epitomized this concept, largely because of the direct mechanism by which hypermethylation of a DNA locus can be faithfully transmitted through cell division. Localized hypermethylation of silenced gene promoters and global DNA hypomethylation are characteristic features of many human tumors (1, 2). However, the idea that histone modifications and other chromatin features also mediate epimutations in tumors has been more controversial, in part due to the obscurity of models for direct epigenetic transmission (3). The recent flurry of reported mutations in chromatinrelated genes in human tumors indicates the need to reassess the perceived roles for chromatin and epigenetic mechanisms in cancer biology.

(from Ryan J.H.R., Bernstein B.E. Genetic Events That Shape the Cancer Epigenome // Science, Vol. 336, No. 6088. – P. 1513-1514)

Task VI: Make all the necessary changes in the abstract below so that it would conform to the norms of the scientific style of speech.

Nanomaterials is something that takes some materials approach which is based on science to technology involving nanomaterials. To tell the truth, it studies materials which have morphological signs like nano, and especially those that have special signs stemming from their size. People usually define nanoscale as smaller than a one tenth of a micrometer in at least one size, though other people sometimes use this word for materials smaller than one micrometer.

On 18 October 2011, the European Commission wrote the following definition of a nanomaterial:

A natural, accidental or handmade material which contains particles in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more some of dimensions is in the size range 1 nm – 100 nm. Generally speaking, in cases and where warranted by concerns for the environment, health, safety or competitiveness the number size distribution threshold of 50 % may be replaced by a threshold between 1 and 50 %.

UNIT II. THE USE OF THE PASSIVE VOICE IN ORAL AND WRITTEN SPEECH

Questions for Discussion:

- > What is the Active Voice?
- > What is the Passive Voice?
- ► How is the Passive Voice formed?
- > When is the Passive Voice used?

Task I: Look at the verb forms in the list below and put them into the right column.

- is developed
- has developed
- are developing
- was developed
- will develop
- is being developed
- had developed
- had been developed
- developed

Table 2

Active Voice	Passive Voice

Task II: Read the information about the Passive Voice

The Passive Voice

A.	

The Passive Voice is formed by means of the auxiliary verb **to be** in the required form and **Participle II** of the notional verb.

We use the Passive Voice to say what happens to the subject.

When we use the Passive Voice, who or what causes the action is often unknown or unimportant. If we want to emphasize the performer of the action, we use the preposition **by**. If we want to emphasize the instrument, we use the preposition **with**.

am/is/are investigated
am/is/are being investigated
have/has been investigated
was/ were investigated
was/were being investigated
had been investigated
will be investigated
will be being investigated
will have been investigated

The Forms of the Passive Voice (the verb **to investigate**)

Table 3

В.			

We use the Passive Voice when:

1. The performer is unknown, irrelevant or obvious. Shell's behaviour-based safety system *is based* on three golden rules: complying, intervening and respecting (the performer is unknown).

The First Folio was printed seven years after the death of William Shakespeare in 1616 (the performer is irrelevant).

In terms of Marcellus shale activity, the company continues to test its 35 000 acre position in Potter and Tioga Counties and has drilled four horizontal wells. Three of these *are completed and being tested* (the performer is obvious)

- 2. The performer is less important than the action. Load pins *can be installed* in the break mechanism for static load measurement or in the base of the winch for dynamic measurements.
- 3. The recipient is the main topic. Foot switches *are used* to operate machinery such as capstans, barriers and anchors/ winches.

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

The Use of the Passive Voice The Peculiarities of the Passive Voice The Formation of the Passive Voice

Task IV: Choose all the possible answers:

The Passive Voice should be used when

- a. there is no performer of the action
- b. the performer is unknown
- c. the performer is irrelevant

Task V: Find in the text "Meet the Challenge of Collaborative Management in Embedded Design" all the cases of the Passive Voice.

Meet the Challenge of Collaborative Management in Embedded Design

The growth in distributed embedded design is driving a need for greater collaboration, both between design teams, but also with third party suppliers of hardware and software IP. The traditional method of handling this situation – the design review meeting – is becoming less efficient as the problem grows. Input from teams around the world has to be analysed and integrated, taking more time and increasing the risk of introducing bugs into the hardware and software.

Demands on managing the data within the design flow are growing as it becomes common to have architecture development in Europe and the US, software development in India, tests in Asia and drivers developed in China. Distributed teams sometimes adopt local approaches and the differences in their approaches can create confusion and uncertainty for those coordinating development.

Such problems are not specific to global organisations. Linking multiple reams with different specialities – from hardware prototyping to software development – across a single campus can also have significant challenges. Multiple 'gate keepers', keeping track of different parts of the project, often cause problems and delays in a distributed design flow.

Collaborative tools such as Software Configuration Management (SCM) are increasingly being used to tackle these challenges, moving from the management of pure software development to cover the entire embedded design flow.

Tool Requirements

Introducing tools for collaborative working can sometimes create more problems than they solve. Tools have to be easy for designers to use and practical for the enterprise to implement. The ease of use requires that it be simple to make changes, and describe them so everyone in the project can see the current status. The practicality mandates this be possible across all teams and locations at a speed that does not introduce delays into development.

Encouraging developers to save their changes frequently improves both communication and collaboration across a project; allowing gate keepers in different sections to see the current status of their part of the project and combine the best elements of the design. There may still be discussions between different teams on which elements are to be included, but these are handled with greater awareness of what is happening elsewhere in the design process.

Saving complete new versions takes up significant amounts of disk storage, yet adding terabytes of storage adds costs, so old files are often discarded, losing vital records of changing. Synchronising such large files is also slow and takes up bandwidth, which is costly across global sites.

SCM Tools

SCM tools have been tackling these problems for many years in software developing environments, providing sophisticated version control and management of complex projects that can run into millions of lines of code. These tools are being extended to the whole design project and can now handle any type of file. For example:

- Diagrams for architecture capture.
- Hardware layouts.
- VHDL.
- EDA.
- Documentation.
- Verification and test files.

SCM tools manage the files needed for software development and can even store sound files and pictures of white boards that capture all the information that has been exchanged throughout the project.

To address the challenges of speed of operation and storage efficiency, an effective technique called 'lazy copy' can be implemented to re-use existing content wherever possible.

This technique ensures that when an object is used in multiple projects or variants, only one copy is stored, thus making it fast, easy and efficient to save, store and synchronise. By recording a data stamp with each submission, files, or entire projects, can be reconstructed for any point in time.

Powerful Architecture

This 'lazy copy' approach is a simple but very powerful concept. It is particularly useful for creating and handling variants of a design, so base files are common and the variant contains only the differences. With multiple variants of a design for different customers, all with slightly different features, drivers and documentation, this can save terabytes of data and make product line management and maintenance significantly easier.

This approach also allows prototypes to be developed more efficiently, re-using existing files and allowing new capabilities to be added quickly and easily, but kept separate from the mainstream development. If the prototype is accepted, these files can then be readily incorporated back into the mainstream product line as a new variant.

Being able to recreate the project status at any point in time is important for tracking and fixing bugs in both hardware and software development.

It allows the point at which bugs were introduced to be quickly identified and the offending change to be backed out simply. This is also important in fixing bugs across variants, as the bug fix can be integrated into all affected variants while still retaining any local customisations.

Third Party IP

It can often be a problem to integrated third party IP, whether hardware or software, into a design flow. Using SCM tools, external suppliers can have tightly controlled visibility of any changes happening in the design so they can change their own software or hardware accordingly. This reduces the potential for incorrect versions of drivers, causing bugs in testing, or even when shipping. The incoming IP can be incorporated directly into the design flow if it comes form a trusted partner, significantly reducing integration time, or it can be kept in a separate area to be evaluated by an engineer before being included in the mainstream.

Using the SCM tool, this third party IP can also be continuously updated with a track of all changes stored as part of the project while retaining the ability to roll back the file to known good versions. One US-based chip developer is using the Perforce SCM tool for a rage of silicon devices that require different drivers for different customers in Asia. While the chip design is handled in California, the driver development is close to the end equipment maker in China.

Using the SCM approach the driver developers can clearly see the design of the chip and have the different variants of the drivers available quickly for the customer.

(from International Electronics Engineer, July 2009)

Task VI: Transfer the following sentences. Use the Passive Voice.

- 1. The engineers are installing the equipment now.
- 2. Popov invented the radio in 1895.
- 3. They issued my article yesterday.
- 4. They have already tested the device.
- 5. They will have delivered the elements by Monday.
- 6. They use the method for reducing the costs.
- 7. They had completed by the deadline.
- 8. When I entered the lab yesterday, they were repairing the machine.
- 9. They have already finished the discussions.
- 10. They will be analysing the results tomorrow at 2 o'clock.

Task VII: Put the verbs in brackets into the correct tense form (active or passive).

A common misconception is that custom ASICs1.... (cost) a fortune in non-recurring engineering (NRE) charges and they2..... (take) many months, if not years, to develop. While this may be true for some digital devices, particularly those which.....3..... (base) on deep sub-mission processes, it is not the case for analogue and mixed signal chips, where even products that will4...... (manufacture) in modest quantities can5...... (benefit) from this approach.

Remember, most mixed-signal chips6...... (produce) using mature processes, which7...... (mean) using fully depreciated fabs with much lower costs than parts that8................. (demand) leading-edge geometrics. EDA parts are cheaper than their heavyweight digital counterparts too.

(from International Electronics Engineer, July 2009)

Task VIII: Write an abstract of the scientific article. Use the Passive Voice.

UNIT III. REPORTED SPEECH

Questions for Discussion:

- > What is the Direct Speech?
- > What is the Reported Speech?
- > What grammatical transformations does the Reported Speech involve?
- > What lexical transformations does the Reported Speech involve?

Task I: Look at the sentences below and put them into the right column.

- 1. Dr. Sakakibara explains: "Of course, there are a lot of common technologies between industrial robots and service robots in mechanisms, controllers and censors."
- 2. While the number of robots for assisting handicapped people is still relatively low, it is reported that there is a potential for a large increase over the next five to ten years.
- 3. Dr. Shinsuke Sakakibara said that the financial crisis of 2008/2009, which had been the leading cause of the global economic crisis, put a halt to the worldwide trend toward automation.
- 4. The IFR President goes on to outline other benefits of robotics for manufacturers in European and, of course, elsewhere: "Robots can improve the working conditions for the staff."
- 5. The IFR President states that in the industrial robotics field, robot manufacturers are working hard on making programming easier.

(from European Design Engineer, April 2012)

Table 3

Direct Speech	Reported Speech

Task II: Read the information about the Reported Speech.

Reported Speech

A.

In contrast to **direct** speech, in which the exact words of the speaker are given, **indirect** speech is a form of utterance in which these words are reported.

While converting direct speech into reported speech, the following rules should be observed:

- 1. Reported speech is used without commas or colons.
- 2. When the speaker reports other people's words the pronouns of the 1st person are replaced by those of the 3rd person; the pronouns of the 2nd by those of the 1st or 3rd. When the speaker reports his or her own words, the pronouns are not changed.
- 3. When the verb in the main clause is in the past tense, the following replacements take place:

Table 4

Here	\rightarrow	There
This, these	\rightarrow	These, those
Now	\rightarrow	At that time (moment)
Today	\rightarrow	That day
Yesterday	\rightarrow	The day before/ the previous day
Ago	\rightarrow	Before
A year ago	\rightarrow	A year before
Last night	\rightarrow	The previous night

When the speaker reports in the same place and time as the speaker whose statement is reported, the above-mentioned replacements do not take place.

When we report something that is still true, we do not need to change the verb.

E.g. The control and instrumentation manager said that Profit Loop **incorpo***rates* the best elements of traditional PID algorithms and model-based control and optimization technologies.

B.

When the verb in the main clause is in the past tense, the tenses are changed according to the rule of the sequence of tenses.

Table 5

The Present Simple	\rightarrow	The Past Simple
--------------------	---------------	-----------------

The Present Continuous	\rightarrow	The Past Continuous
The Present Perfect	\rightarrow	The Past Perfect
The Present Perfect Continuous	\rightarrow	The Past Perfect Continuous
The Past Simple	\rightarrow	The Past Perfect
The Past Continuous	\rightarrow	The Past Continuous/ the Past Perfect Continuous
The Past Perfect	\rightarrow	The Past Perfect
The Past Perfect Continuous	\rightarrow	The Past Perfect Continuous
The Future Simple	\rightarrow	The Future Simple in the Past (will \rightarrow would)
The Future Continuous	\rightarrow	The Future Continuous in the Past
The Future Perfect	\rightarrow	The Future Perfect in the Past
The Future Perfect Continuous	\rightarrow	The Future Perfect Continuous in the Past

С.

There is a great difference between the style of direct and that of reported speech. Direct speech is characterized by a certain looseness of structure and is more emotional than the reported speech. Reported speech, on the contrary, is characterized by strict logic structure and brevity. Accordingly, when there are no conjunctions expressing casual relations in direct speech, they must be introduced into reported speech.

E.g. The research associate said, "The thickness of the glass membrane of the electrode is particularly important. It determines the resistance of the electrode and affects its efficiency."

The research associate said the thickness of the glass membrane of the electrode was particularly important **as** it determined the resistance of the electrode.

So and such are replaced by very, exceedingly, etc. in exclamatory sentences.

E.g. The professor said, "The silver/ silver chloride electrodes change so quickly!"

The professor said the silver/ silver chloride electrodes changed very quickly.

The company said, "The reusable respirator is **such** a crucial equipment."

The company said the reusable respirator was an **exceedingly** (**very**) crucial equipment.

Interjections must be replaced by suitable adverbial modifiers.

E.g. The director said, "Alas! The shipment of liquids in drums was hazardous and inefficient!"

The director **exclaimed in despair** the shipment of liquids in drums had been hazardous and inefficient!

D.

Reported statements are mainly introduced by the verbs to say, to tell, to announce and in official style by the verb to *inform*.

E.g. ABB also recently **announced** that its SEC in Buenos-Aires, Argentina had been certified by TÜV.

Say and *tell* are the verbs most commonly used to report statements. We use an **object** after *tell*, but not after *say*:

E.g. *The research advisor told me that he had read the rough copy of my thesis.*

Stuart Nunns, global manager of ABB's SEC programme, said that the need for reliable engineering resources and quality safety automation solutions had exponentially grown over the previous few years.

However, we can use *to* + **object** after *say*, but not after *tell*:

E.g. *The research advisor* said to me that he had read the rough copy of my thesis.

With the verbs to admit, to deny, to mention and to report we can report a statement using an *ing*-clause.

E.g. The research advisor mentioned reading the rough copy of my thesis.

E.

We usually report orders using verbs such as to ask, to tell, to forbid, etc. with a to-infinitive:

E.g. *The vice president of strategy and global marketing* **asked** *manufacturers to do more with less.*

We report question using verbs such as *to ask*, *to want*, *to know*, etc. with *wh*-clauses or *if*-clauses.

E.g. He asked when the equipment would be delivered.

He asked if the equipment had been delivered.

Note: In reported questions the direct word order takes place.

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

Sequence of Tenses Reported Orders and Questions Tenses in Direct Speech Style Peculiarities of Direct and Reported Speech The Notion of Reported Speech Reported Statements

Task IV: Choose the correct answer to the following questions:

1. Is the following sentence true or false:

- While reporting one's words it is necessary to replace pronouns.
- a) false
- b) true
- 2. Render the statement "Energy dissipaters have been tested" in Reported Speech
 - a) Paul and Marsh claimed that energy dissipaters had been tested.
 - b) Paul and Marsh claimed that energy dissipaters had tested.
 - c) Paul and Marsh claimed that energy dissipaters were tested.
 - d) Paul and Marsh claimed that energy dissipaters have been tested.
- 3. Decide whether the following statement is true or false: While rendering some utterance in the Reported Speech, it is always necessary to replace "so" and "such" by suitable adverbial modifiers.
 - a) true
 - b) false
- 4. Which of the following sentences is grammatically incorrect?
 - a) The research advisor told to me to check the results.
 - b) The research advisor said to me that I should check the results.

- 5. Which of the following sentences is grammatically correct?
 - a) Smith asked if the system consisted of inexpensive mechanisms.
 - b) Smith asked if did the system consist of inexpensive mechanisms.

Task V: Read the following extract from Science News. Decide whether the underlined verbs are correct or not. If the verb is correct, put a «+». If the verb is not correct, write its right form.

In a recent article on energy and fuels, it *is claimed* (1) that existing technology *can* (2) produce biodiesel fuel from municipal sewage sludge. David M. Kargbo pointed out in the article that demand for biodiesel *has led* (3) to the search for cost-effective biodiesel feedstocks, or raw materials. He added, that soybeans, sunflower seeds and other food crops *had been used* (4) as raw materials but *are* (5) expensive. Sewage sludge *could have become* (6) an attractive alternative feedstock – the United States alone *produce* (7) about seven million tons of it each year. Kargbo mentioned that to boost biodiesel production, sewage treatment plants could use microorganisms that *produced* (8) higher amounts of oil. However, it *was cautioned* (9) in the article that to realize commercial opportunities, huge challenges *exist* (10).

Task VI: Write the appropriate form of the verbs in brackets. More than one form is possible in one sentence.

- 1. He asked me if I (take) part in that conference.
- 2. The director demanded to know why the equipment (not install) the previous day.
- 3. She called me to ask if I (be) going to the development laboratory that day.
- 4. My research advisor asked if I (ever hear) about this theory.
- 5. A colleague wanted to know if I (can relieve) him that evening.
- 6. One of the students says he (want) to enter a PhD programme after he takes his master's degree.
- 7. He called me on my mobile and asked whether I (write) the article.

Task VII: Complete the second sentence so that it has a similar meaning to first sentence, using the word given. *Do not change the word given*. You must use between *three* and *nine* words, including the word given.

- 1. "Our customers demand the utmost in secure process control systems," said the security programme manager.
 - for The security programme manager said thatthe utmost in secure process control systems

2. The director said to us, "Your prime objective now is to eliminate similar incidents in the future."

prevent The director said that.....such incidents in the future.

3. The president of the company said, "Corporations, entrepreneurs, investors and researches are considering ways in which this technology can be used."

thinking The president of the company said that corporations, entrepreneurs, investors and researches...... be used.

4. The director said, "Install the equipment by next week."

ordered The director.....week.

5. "We will optimize the costs", the company said.

to The company.....the costs.

- 6. "Selective laser printing is able to compete with conventional manufacturing techniques without the requirement for extensive moulds," the leader of the project said.
 - **potential** The leader of the project said that selective laser printing......with conventional manufacturing techniques without the requirement for extensive moulds.
- 7. "IO-Link promises simplified installation by placing parallel wiring and various types of analogue signals with IO-Link," the consortium reported.

Accordingsimplified installation by placing parallel wiring and various types of analogue signals with IO-Link," the consortium reported.

- 8. The sales and marketing manager said, "Fanue robots now come with onboard vision; there is no need for engineers to get bogged down in interface and connectivity issues."
 - **necessary** The sales and marketing manager said that Fanue robots came with onboard vision; for engineers to get bogged down in interface and connectivity issues.

Task VIII: Role play.

Cards for the students

Student A: You work for **Microsoft**. You will receive a letter of inquiry. Task: 1. Respond to the letter, using 'The software you need is in the planning stage now. It will hit the market next year.'

2. Render the inquiry in Reported Speech.

Student B: You work for **Corel Draw**. You will receive a letter of inquiry. Task: 1. Respond to the letter, using 'We have sold out all the items, but there will be a new delivery next week.'

2. Render the inquiry in Reported Speech.

Student C: You work for **Norton**. You will receive a letter of inquiry. Task: 1. Respond to the letter, using 'The software we have won't help you in this particular situation. You need to reinstall the operating system.'

2. Render the inquiry in Reported Speech.

Student D: You work for **Intant**. You will receive a letter of inquiry. Task: 1. Respond to the letter, using 'We only deal with Windows XP, so we won't be able to install Windows 7 on your laptop.'

2. Render the inquiry in Reported Speech.

Student E: You work for **Linux**. You will receive a letter of inquiry. Task: 1. Respond to the letter, using 'This type of product has been discontinued. We don't produce it now.'

Render the inquiry in Reported Speech.

Student F: You have heard that Microsoft is developing MS Office 2011. You want to buy it.

Task: Write a letter of inquiry to **Microsoft** and render the received information in Reported Speech.

Student G: You want to buy Corel Draw Graphics Suite X5 Rus. Task: Write a letter of inquiry to **Corel Draw** and render the received information in Reported Speech. **Student H**: Your computer was infected by a virus. It resulted in the system scratch. You think that the installation of a Norton Antivirus will help to solve th problem.

Task: Write a letter of inquiry to **Norton** and render the received information in Reported Speech.

Student I: You want to buy Windows 7 for your laptop. Task: Write a letter of inquiry to **Intant** and render the received information in Reported Speech.

Student J: You want to buy Linux Ubuntu 9.4.

Task: Write a letter of inquiry to **Linux** and render the received information in Reported Speech.

UNIT IV. CONDITIONALS

Questions for Discussion:

- > What do you know about conditionals?
- > How many types of conditionals do you know?
- ➤ How are conditionals formed?

Task I: Look at the sentences below and put them into the right column.

- 1. If you are not a regular user of social media and just want to see a spacecraft launch, NASA offers other ways to experience a launch.
- 2. If the universe might contract, what would happen to the time and the third law of thermodynamics?
- 3. If "our time" started at the Big Bang, some Objective time must have existed before that.
- 4. Entities x and y are identical if every predicate possessed by x is also possessed by y and vice versa.
- 5. If the Universe hadn't been timeless, we wouldn't see any evidence of other civilizations.

Table 6

Real Events	Unreal Events

Task II: Read the information about conditionals.

Conditionals Sentences

A.

There are four types of conditionals in the English Language:

- 1. Zero Conditional
- 2. The First Conditional
- 3. The Second Conditional
- 4. The Third Conditional

Zero Conditional

Model: If you heat water to 100° C, it boils.

Zero Conditional is used to state general truths and scientific facts. The Present Simple is used both in the main clause and in the conditional clause. The First Conditional

Model: Exploration strategies *will proceed* more readily and economically if the requisite technology *is developed* in advance.

The First Conditional is used to describe possibilities in the present or the future. The Future Simple is used in the main clause; The Present Simple is used in the conditional clause.

B.

The Second Conditional

Model: If the single largest asteroid (Ceres) *were* to be used to build orbital space colonies, the total living area created *would be* approximately 150 times the surface area of the Earth.

The Second Conditional is used to describe unreal situations in the present or the future. The Future Simple in the Past (would + infinitive) is used in the main clause; the Past Simple is used in the main clause.

Note: the verb to be in the Second Conditional is usually used in its plural form (*were*)

The Third Conditional

Model: Even if the assertions *had been* accurate, they *wouldn't have proven* that people are creating a global warming crisis.

The Third Conditional is used to describe unreal situations in the past. The Future Perfect in the Past is used in the main clause (would + perfect infinitive); the Past Perfect is used in the conditional clause.

Mixed Conditionals

Example: The leadership *could extend* to exploration if aspects of exploration beyond low-Earth orbit *are included* in the goals of the partnership agreement.

Mixed Conditionals are those which combine parts of different models. In the example given above the main close is the Second Conditional, but the conditional clause is the First Conditional.

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

The Second Conditional, the Third Conditional and Mixed Types of Conditionals

The Fourth Conditional

Zero Conditional and the First Conditional

Task IV: Choose the correct answer to the following questions:

- 1. How many types of conditional sentences are there in English?
 - a) 5
 - b) 3
 - c) 2
 - d) 4
- 2. What conditional is used to describe unreal situations in the present or future?
 - a) The Third Conditional
 - b) The Second Conditional

Task V: Define whether the condition refers to the present/ future or to the past.

- a) The situation is real, the condition refers to the present or the future
- b) The situation is general truth or scientific fact
- c) The situation is unreal, the condition refers to the present or the future
- d) The situation is unreal, the condition refers to the past
- e) Mixed conditional

Example: If climate changes gradually, many plants may be able to "migrate" by spreading seeds into new areas where they can now grow. a)

- 1. If the emissions changed, the alteration in the CO_2 greenhouse effect would only slightly change the global temperature.
- 2. If international partners are actively engaged to success, there could be substantial benefit to foreign relations.
- 3. Wood doesn't burn if there is no air.
- 4. This idea would only answer the riddle of the ice ages if such large changes in atmospheric composition were possible.
- 5. Skyscrapers are designed to support themselves for three hours in a fire even if the sprinkler system fails to operate.
- 6. The maximum flame temperature is reduced by two-thirds if air is used rather than pure oxygen.
- 7. If these alignments occur, their effects on the Earth will be negligible.
- 8. If it had been free fall, with no restraint, the collapse would have only taken eight seconds and would have impacted at 200 km/h.
- 9. If a chemist believed that the theories of the atomicity of matter were erroneous, all the compounds whose elements combined in fixed proportions would be regarded as anomalies.
- 10. If the fuel and the oxidant stat at ambient temperature, a maximum flame temperature can be defined.

- 11. The scientists predict that this nightmare could happen if the world's largest super-volcano erupts for the first time in 600,000 years.
- 12. If the magma had been at depths of two or three kilometers we'd have been a lot more concerned.
- 13. If pure oxygen is used, the heat only needs two molecules (carbon monoxide and water.
- 14. The difficulty will be diminished if the public understands how poor the models actually are.
- 15. If one or two columns were lost, the loads would shift into adjacent columns and the building would remain standing.
- 16. If there had been only radiative heat transfer, the greenhouse effect would have warmed the Earth to about seventy-seven degrees centigrade rather than to fifteen degrees centigrade.
- 17. If Wildavsky's scenario is correct, the major losers would be ordinary people.
- 18. If a second log is added to the fireplace, the temperature does not double.
- 19. If the atmosphere were also transparent to infrared radiation, the infrared radiation produced by an average surface temperature of minus eighteen degrees centigrade would balance the incoming solar radiation.
- 20. Even if all other greenhouse gases (such as carbon dioxide and methane) had been disappeared, we would have still been left with over 98 percent of the current greenhouse effect.

Task VI: Decide whether the underlined verb is in the correct form. If it is correct, put *correct*, if it is incorrect, put the verb into the correct form.

Example:

- 0. Exploration strategies will proceed more readily and economi cally if the requisite technology is developed in advance. correct
- 00. would
 - 1. Even if the electron radius *were* as large as 2.8 fm (the classical electron radius), its surface would have to be rotating at 2.3×10^{11} m/s.
 - 2. If we link multiple Stern–Gerlach apparatuses, we *would* clearly see that they do not act as simple selectors.
 - 3. This will only be feasible if the experiment *brought* about no permanent changes in the object of study.

- 4. If a planet had a very thick atmosphere, especially one that absorbed a lot of solar radiation, temperatures *would be* very hot.
- 5. If all the items in the population *are* practically identical, everything is fine.
- 6. If the objects were dissimilar, e.g. people, this variance *will* bring about quite a lot of unwanted variation in the reactions.
- 7. If you are watching a wave go by you will notice that they *move* at a constant velocity.
- 8. Iron rusts if it *got* wet.
- 9. If NASA *has* decent funding, problems like these wouldn't happen.
- 10. If a planet had no inertia it *could come* to a stop or accelerate to high speeds without any force applied to it.
- 11. If the Earth *was* the only planet to orbit the Sun, then the Earth and Sun would each orbit the common CM, located at a point within a few hundred km of the Sun's center with a period of 1 year.
- 12. If the research had proved the technology successful, private companies *would have jumped* in and sold cheap solar power to the world.
- 13. A public research environment *would have worked* best if the initiators of a project had a certain amount of baseline funding at their disposal to bring their research through the idea stage until the first preliminary data.
- 14. The particle will then obtain a velocity in opposite direction if repulsion force *will be maintained*.
- 15. If a wave *hit* an obstacle at a right angle to the surface then the wave is reflected directly backwards.

Task VII: Make up 10 sentences which contain conditionals.

Task VIII: Put the verb in brackets into the correct form.

- 1. If scientists could determine how long water has been in an underground aquifer, they (know) how fast it travels and how fast it can be replenished in certain areas.
- 2. If the cells (be) actively growing and incorporating arsenate into their DNA, then their DNA would have contained a higher percentage of arsenic than the researchers found.
- 3. Although still under development, the system can be used to make connections that (be) difficult to find, even if it were possible to read all the documents.

- 4. If scientists (figure out) how old an ice sample is, they will understand the composition of the atmosphere at the time it froze from the bubbles within it.
- 5. If the experiment (be) properly randomized, no filters would have been necessary.
- 6. If we (have) medical tests that had the same failure rate as a polygraph, then physicians that use those tests would be convicted of malpractice.
- 7. Even if two individuals (have) the same information, the way they interpret it can be biased.
- 8. Even if these case studies (be) true, they would have been scientifically poor evidence.
- 9. If the true rule (encompass) the current hypothesis, then the positive tests will not show that the hypothesis is false.
- 10. If water ... (be) non-polar, it would not be able to form hydrogen bonds.
- 11. If one of the entangled photon's trajectory tilts up, the other one, no matter how distant, (tilt) down to compensate.
- 12. However, the results were not exactly what would have been expected if the experiments (conduct) on Earth soil.
- 13. If the particles were classical spinning objects, one (expect) the distribution of their spin angular momentum vectors to be random and continuous.
- 14. If the experiment is conducted using charged particles like electrons, there (be) a Lorentz force that tends to bend the trajectory in a circle.

Task IX: Combine two sentences into one, using conditionals.

- 1. The wave strikes the obstacle not at a right angle. It is reflected directly backwards.
- 2. The concept didn't enable each microprocessor to report its unique status to the central control system. The operator couldn't.
- 3. The MMS 35 IS is purchased without the internal sample system package. It requires an external moisture probe connected to the hygrometer through a cable.
- 4. The user doesn't wish. The HF8 can't be integrated into an RS485 network.
- 5. The equation isn't based on the natural numbers. Some of these operations are valid as negative.
- 6. The y values decrease. The equation is decreasing.

UNIT V. THE NON-FINITE FORMS OF THE VERB (VERBALS)

Questions for Discussion:

- > What do you know about verbals?
- > What types of verbals do you know?

Task I: Look at the forms of the verb "to investigate" below and put them into the right column. One form may be put into both columns.

Investigating was investigated having investigated had investigated will investigate being investigated to investigate has investigated having been investigated investigated

Table 7

Verbals	Finite Verbs

Task II: Read the information about verbals.

Verbals

The verb has finite and non-finite forms (verbals). The difference between finite and non-finite forms of the verb is that verbals cannot be used as the predicate of the sentence because they don't express person, number or mood. There are the following verbals in the English language: **participle**, **infinitive** and **gerund**.

Task III: Choose the correct answer to the following question:

In which sentence is the underlined part the predicate?

- 1. Foot switches *are used* to operate machinery such as capstans, barriers and anchors/winches.
- 2. Foot switches are devices *used*_to operate machinery such as capstans, barriers and anchors/winches.

PART I. PARTICIPLES

Questions for Discussion:

- > What do you know about participles?
- > What types of participles do you know?

Task I: Look at the sentences below and put them into the right column.

- 1. The effects of global warming are the ecological and social changes *caused* by the rise in global temperatures.
- 2. The number of scientists *investigating* the effects of the global warming is large.
- 3. *Having investigated* the global warming, the scientists came to the conclusion that its effects are real, global and measurable.
- 4. A *researched* study is a study which is based on thorough investigation of pertinent data.
- 5. The effects of the global warming *having been investigated*, the scientists came to the conclusion that the global warming contributes to the rise in sea levels.

Table 8

Participle I	Participle II

Task II: Read the information about participles.

Participles

A.

The participle is a non-finite form which combines verbal and adjectival qualities. There are two types of participles in the English language: **Participle I (the Present Participle)** and **Participle II (the Past Participle)**.

Participle I is formed by adding the suffix *-ing* to the stem of the verb, e.g. use – using.

Participle II of regular verbs is formed by adding *-ed* to the stem of the verb, e.g. use – used, but a lot of verbs have irregular past participles, e.g. know – **known**.

B.

Participle I is generally used to form a simple sentence form a complex one, containing an adjective clause with an active verb.

E.g. The part must be moulded and painted by the component supplier, *which potentially causes color mismatches with the body* (the underlined part is an adjective clause with an active verb).

The part must be moulded and painted by the component supplier *causing* color mismatches with the body (this is a simple sentence with Participle I).

Participle II is generally used to form a simple sentence form a complex one, containing an adjective clause with a passive verb.

E.g. The benchmarking exercise, *which was carried out by HFL Risk Services*, highlighted a distinct disconnect between those responsible for setting policy and those responsible for carrying it out (the underlined part is an adjective clause with a passive verb).

The benchmarking exercise *carried* out by HFL Risk Services highlighted a distinct disconnect between those responsible for setting policy and those responsible for carrying it out (this is a simple sentence with Participle II).

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

Functions of Participles Types of Participles Participles I and II

Task IV: Choose the correct answer to the following questions:

- 1. Which of the sentences contains Participle I?
 - a) Scientists suggesting some schism in the past noted that the shapes of the continents seem to fit together
 - b) The theory proposed by Newton asserts that light is composed of tiny particles.
- 2. Which of the sentences is grammatically correct?
 - a) Modern scientists proposed radical new ideas do not need to fear the reactions of those entrenched in the existing system.
 - b) Modern scientists proposing radical new ideas do not need to fear the reactions of those entrenched in the existing system.

Task V: Form the participle out of the verb in brackets.

- 1. One of special steels (use) to address various industry needs is the Sandvik SAF 2707 HD.
- 2. The company (reduce) production losses will save a minimum of USD 345,000 over a ten-year period.
- 3. The company (know) for its innovative level measurement technology offers the user many practical benefits.
- 4. The result was a radar technology (adapt) to the requirements of the users.
- 5. VEGAPULS SR 68..... (suit) for a wide variety of bulk solid applications offers the users all the advantages of radar technology at a keen price.
- 6. The sensor (contribute) to profitable plant operation is uninfluenced by dust.
- 7. VEGAPLUS WL 61 is the first radar ... (develop) especially for the water/sewage sector.
- 8. This modern technology (deliver) far more reliable measurement data has proven successful in everyday operation.
- 9. The small, light radar sensor (record) the level of the water is mounted on a jib.
- 10. The costs of installation and maintenance are very low (compare) with elaborate gauging pipes.

Task VI: Form one sentence from two, using participles. Sometimes two variants are possible.

- 1. The radar provides early warning of impending floodwater. It measures the river level with a precision of ± 2 mm.
- 2. SITRANS LR560's plug and play performance is ideal for most solid applications. The applications include those with extreme dust and high temperatures to 200°C.
- 3. The advanced 'echo marker' signal processing provides a reliable continuous pulse shape. This shape is unaffected by environmental conditions.
- 4. The transmitter includes an optional graphical local display interface. The interface improves setup and operation.
- 5. Pressure-dependant changes in capacitance are cause by membrane movement. Such changes are measured at the electrodes of ceramic carrier.

- 6. Energy-saving measures are achieved through waste heat recovery devices. Such devices include flue gas heat exchangers, flue gas condensers or heat exchangers for residualblow-down and vapor coolers.
- 7. Portable gauging units are designed to be used in many different tanks. These units can be calibrated in a laboratory independent of the tank.

Task VII: Read the information about the forms of Participle I.

The Forms of Participle I

While Participle II has only one form, Participle I has four forms: indefinite active, indefinite passive, perfect active and perfect passive.

Table 9

	Active	Passive
Indefinite	doing	being done
Perfect	having done	having been done

We use the active form if the meaning of Participle I is active, the passive form is used when the meaning of Participle I is passive.

Compare: Doing the research, Mark constantly consulted his advisor and

The nature of these partnerships will be different according to the type of research *being done*.

We use the indefinite form when the action performed by the participle is/was simultaneous with the action of the predicate. The perfect form is used when the action performed by the participle was prior to the action of the predicate.

Compare: Doing the research, Mark constantly consulted his advisor and

Masters of Engineering become independent researchers, *having done* innovative research and written a doctoral dissertation.

Note: Verbs of sense perception as well as verbs of motion don't have the perfect form. E.g. Seeing the results of the experiment, the scientists were puzzled (not having seen).

Task VIII: Choose the correct answer to the following question:

What form of Participle I does the sentence "The experiment having been done, we checked it" contain?

- a) indefinite passive
- b) indefinite active
- c) perfect passive
- d) perfect active

Task IX: State the form of Participle I.

- 1. The wish for a reliable level sensor for measuring ranges up to 30 meters *being arisen*, the company reacted quickly.
- 2. Having prepared the samples for the second interlaboratory tests, The Chemical Coordinating Center distributed them to 16 participating laboratories.
- 3. The facility is a continuous chemical process plant operating nonstop, year-round.
- 4. The experiment having been done, we checked it.
- 5. Radar technology being unaffected by temperature, fog, wind or rain offers considerable advantages over ultrasonics.
- 6. Seventy eight cancer patients were enrolled: about 90 % reported having received information about diagnosis and therapy and 80 % about prognosis.
- 7. The largest existing results *having been gathered*, this experiment featured a high degree of participation.
- 8. The latest level-measurement technologies can cope with dust, noise, strong air currents and corrosive atmospheres being robust, accurate and low-maintenance.
- 9. Having studied Construction Economics & Management, Diarmund worked as Junior Quantity Surveyor for a three-year period.
- 10. With the cost of energy and nitrogen contributing to higher cost of productions, and alternative method was sought.

Task X: Form the correct form of Participle I from the verb in brackets.

- 1. (examine) addition, multiplication and division of functions, we now turn our eye toward differentiating compositions of functions.
- 2. The latest examples in the field, (introduce) by Enraf Tanksystem, use special tapes with wires on either side for the power and signal transmission between the sensing head and the unit.

- 3. (hear) the word 'manual' in relation to tank gauging, most people picture a traditional tape and bob assembly.
- 4. The new methods (introduce), the productivity of labor at the plant went up.
- 5. (do) some research he concluded that one of the largest risks/ complications of ablative CO_2 Laser resurfacing is permanent hypopigmentation.
- 6. State-of-the-art manual electronic gauges are highly accurate portable measuring instruments (incorporate) microprocessor control and reliable electronic sensors.
- 7. Students enter medical school (do) some biological or chemistry research.
- 8. Recent developments by one manufacturer (work) in the sector of manual gauging have taken the concept onto a different plane.
- 9. The new alloy (test), now we can use it for different purposes.
- 10. Portable gauging units, (design) to be used on many different tanks, can be calibrated in a laboratory independent of the tank.

Task XI: Read the information about the functions of Participle I.

The Functions of Participle I

The main functions of the participles are:

- 1. Attribute.
- E.g. The benchmarking exercise *carried* out by HFL Risk Services highlighted a distinct disconnect between those responsible for setting policy and those responsible for carrying it out.
- 2. The adverbial modifier of cause.
- E.g. The latest level-measurement technologies can cope with dust, noise, strong air currents and corrosive atmospheres *being* robust, accurate and low-maintenance.
- 3. The adverbial modifier of condition.
- E.g. If *used* in classified areas, the instrument will have to be intrinsically safe and approved by the relevant testing authorities
- 4. The adverbial modifier of time.
- E.g. When *used* to gauge corrosive chemicals FKM would not be a suitable gasket material in many cases.

- 5. The adverbial modifier of result.
- E.g. The earliest manual electronic gauges were designed to be operated under open conditions, limiting their use to non-corrosive liquids.

Task XII: Define the function of the participle in the sentence "Singleuse bags are simply lowered onto the piercing knife, ready to discharge many times faster when connecting reusable bags to unloaders."

- a) the adverbial modifier of condition
- b) the adverbial modifier of time
- c) the adverbial modifier of result
- d) the adverbial modifier of cause

Task XIII: Rewrite the sentences using participles.

- 1. Single-use bags can be less costly to purchase if they are with reusable bags.
- 2. When senior management take a more active role in process safety policy, they find that it can in actual fact save the company money.
- 3. Trials that are carried out on compounds containing Hyperform HPR-803 have already shown that it is possible to produce parts with a shorter cooling time.
- 4. More and more automotive OEMs are using STAMAX LGFPP resins in structural applications because the material delivers highquality performance.
- 5. The hopper charges the intake adapter of an integral flexible screw conveyor if it is equipped with a hinged door to access the interior safety.
- 6. It must be possible to verify and recalibrate the gauging instruments when they are used during custody transfer operations.
- 7. Arnitel PB-500H meets the Fiat Group Automobiles technical requirements and it offers a cost advantage over current solutions.
- 8. Identification of plant and processes is the first step in managing process safety because it is both critical to site safety and the business.
- 9. The biotechnology industry which consists mainly of small start-up enterprises is a good example for the overlap and partial fusion of disciplines.
- 10. Company resources are not necessarily targeted to best effect if they are not properly directed.

PART II. The gerund

Questions for Discussion:

- > What do you know about the gerund?
- > What forms of the gerund do you know?

Task I: Look at the sentences below and put them into the right column.

- 1. *Investigating* the effects of the global warming is not difficult.
- 2. The scientists *have investigated* the effects of the global warming.
- 3. The effects of the global warming are worth *investigating*.
- 4. The effects of the global warming *having been investigated*, the scientists came to the conclusion that the global warming contributes to the rise in sea levels.
- 5. The effects of the global warming *were investigated* by the scientists.

Table 10

Gerund	Finite Verb

Task II: Read the information about the gerund.

The Gerund

|--|

The gerund is a non-finite form which combines verbal and nominal qualities. It is formed by adding the suffix **-ing** to the stem of the verb, so its forms coincide with the forms of Participle I. The main forms of the gerund are:

Table 11

	Active	Passive
Indefinite	doing	being done
Perfect	having done	having been done

We use the active form if the meaning of a gerund is active, the passive form is used when the meaning of a gerund is passive.

We use the indefinite form when the action performed by a gerund is/was simultaneous with the action of the predicate. The perfect form is used when the action performed by a gerund was prior to the action of the predicate.

B.

The gerund is used after:

To accuse of, to admit, to adore, to agree to, to anticipate, to approve of, to avoid, to be astonished at, to be aware of, to be busy in, to be capable of, to be fond of, to be guilty of, to be indignant at, to be pleased/displeased at, to be proud of, to be sure of, to be surprised at, to be worth while, to burst out, cannot help, can't stand, to carry on, to complain of, to contemplate, to deny, to detest, to depend on, to describe, to dislike, to enjoy, to excuse, to fancy, to feel like, to finish, to forgive, to give up, to give up the idea of, to insist on, to keep, to keep on, to like, to leave off, to look forward to, to look like, to mention, to mind, to miss, to miss an opportunity of, not to like the idea of, to object to, to persist in, to postpone, to prevent from, to put off, to quit, to recall, to rely on, to report, to resent, to resume, to risk, to speak of, to succeed in, to suggest, to suspect of, to thank for, to think of, to tolerate

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

General Notion and Forms Types of the Gerund The Use of the Gerund

Task IV: Choose the correct answer to the following questions:

- 1. Choose the statement which is true.
 - a) The gerund combines verbal and nominal qualities.
 - b) The gerund combines verbal and adjectival qualities.
- 2. Which of the following verbs is used with the gerund?
 - a) to agree
 - b) to want
 - c) to insist on
 - d) to plan

Task V: Put the verb in brackets into the correct gerundial form.

- 1. RenewableUK the leading professional association for the UK wind and marine renewable industries suggests (increase) offshore wind targets.
- 2. The scientist mentioned (get) fantastic of the experiment.
- 3. Wear protection solution succeeds in (handle) hot clinker at coal-fired power station.
- 4. Tanzania depends mainly on (use) hydropower.
- 5. He is astonished at (give) the first prize.
- 6. He is busy in (write) an article.
- 7. Senior management and board of directors admit (finance) implementation of changes and initiatives to underpin safety.
- 8. Radar technology offers considerable advantages over ultrasonic because it operates without(affect) by temperature, wind, fog or rain.

Task VI: Read the information about the differences between the gerund and the participle.

The Peculiarities of the Gerund

Only the gerund is used:

- 1) after prepositions;
- 2) in the function of the subject;
- 3) in the function of the object;
- 4) with the noun in the possessive case;
- 5) with a possessive pronoun;
- 6) in the function of the attribute when preceded by a preposition;
- 7) in the function of the adverbial modifier when preceded by a preposition.

Task VII: Choose the correct answer to the following question:

What part of the underlined non-finite form of the verb do we have in the sentence "Researches made breakthroughs in *rolling* element bearing steels"?

- a) participle
- b) gerund

Task VIII: Define whether the –ing form is a gerund or not. Write «+» is it is a gerund and «–» if it isn't.

- 1. Paul Stevens reports on some of the latest developments and applications, *including* pressure-charging systems and hybrid power trains.
- 2. CVTs are steadily growing in popularity, largely due to the fuel savings that can be achieved.
- 3. CVT has potential applications beyond being simply a gearbox replacement.
- 4. Having originally used volumetric filling equipment, the company is enjoying a vast array of benefit from its switch to Flexicon technology.
- 5. Rather than converting kinetic energy into electricity for storage for storage in a battery, a small CVT transfers the energy directly into a compact, high-speed flywheel.
- 6. The flywheel hybrid units attaches to an unused power take-off shaft with Tototrack's traction drive managing the flow of energy in and out of Ricardo's high-speed carbon composite Kinergy flywheel.
- 7. A Volvo-led project to evaluate flywheel technology will incorporate Torotrack's CVT technology with the aim of boosting fuel economy.
- 8. After working with Watson-Marlow, Wine Innovations decided to acquire Flexicon PD221 industrial peristaltic machines in combination with Flexicon MC12P OEM control units.
- 9. Another way of using flywheels is used in the UK Flybus project investigating alternatives to battery-hybrid buses.
- 10. In normal driving, the transmission provides seamless ration changes.
- 11. The system could be equally effective on commercial vehicles such as delivery vans and trucks operating stop-start schedules.
- 12. The technology could make a significant contribution to reducing vehicle emissions globally.
- 13. This is Bosch's second push belt plant, the first being located in the Netherlands.
- 14. During tight maneuvering, the transmission's ability to control each rear wheel independently means that the wheels can be rotated in opposite directions.

- 15. The advantages of peristaltic pumps are many, including no contamination of the fluid *being pumped*.
- 16. By linking the vehicle's steering system with the IVT's control mechanism, the car can pivot around its rear axle.
- 17. Sizes range from 3.0-in to 5.7-in to accommodate the most demanding design envelopes and application requirements.
- 18. Stainless steel pipes, pistons, three-way valves and air diaphragms all cause certain issues when it comes to cleaning.
- 19. Designers can specify an integrated Intelli-Gen electronic control drive utilizing a factory-programmed digital signal processor and custom options cards.
- 20. On having originally used volumetric filling equipment, the company is enjoying a vast array of benefit from its switch to Flexicon technology.

PART III. The infinitive

Questions for Discussion:

- > What do you know about the infinitive?
- > What forms of the infinitive do you know?

Task I: Look at the forms below and put them into the right column.

- to have investigated
- has investigated
- have investigated
- to be investigated
- investigated
- to investigate
- is investigated

Table 12

Finite Verb

Task II: Read the information about the infinitive.

The Infinitive

A.

The infinitive is a non-finite form of the verb which has a verbal and nominal character.

The main forms of the infinitive are:

Table 13

	Active	Passive
Indefinite	to do	to be done
Perfect	to have done	To have been done

We use the active form if the meaning of an infinitive is active, the passive form is used when the meaning of an infinitive is passive.

We use the indefinite form when the action performed by an infinitive is/was simultaneous with the action of the predicate. The perfect form is used when the action performed by an infinitive was prior to the action of the predicate.

B.

The infinitive is used after the verbs:

To advise, to afford, to agree, to aim, to allow, to arrange, to ask, to attempt, to beg, to challenge, to command, to condemn, to consent, to decide, to demand, to deserve, to desire, to enable, to encourage, to expect, to fail, to force, to forget, to guarantee, to help, to hope, to induce, to inspire, to instruct, to invite, to learn, to manage, to negotiate, to oblige, to offer, to order, to permit, to persuade, to plan, to plead, to pledge, to promise, to refuse, to remind, to resolve, to seek, to swear, to teach, to tell, to train, to threaten, to undertake, to urge, to volunteer, to want, to warn, to wish

Task III: Put the headings into the correct place. There is one extra heading which you do not need to use.

The Use of the Infinitive General Notion and Forms Types of the Infinitive

Task IV: Choose the correct answer to the following questions:

- 1. What form of the infinitive is used in the sentence: "The system enables greater performance gains to be achieved"?
 - a) indefinite active
 - b) indefinite passive
 - c) perfect active
 - d) perfect passive
- 2. Which of the verbs is *not* used with the infinitive?
 - a) to decide
 - b) to warn
 - c) to suggest
 - d) to arrange

Task V: Define the form of the Infinitive.

- 1. Wine Innovations decided to acquire Flexicon PD221 industrial peristaltic machines.
- 2. He is mentioned to have done the research.

- 3. Modern solids handling systems have to be carefully engineered, installed and maintained.
- 4. Watson-Marlow decided to use 504 series pumps.
- 5. Continuously variable transmissions are reported to have been used in mass produced vehicles.
- 6. Process efficiency and operator safety are promised to be improved.
- 7. The capability of Solidquid solid/liquid delivery system is said to have been expanded.
- 8. Purified terephthalic acid is arranged to be transported from storage silos to downstream processing vessels.

Task VI: Put the infinitive in brackets into the correct form.

- 1. Internet protocol standards allow grid devices...... (to exchange) information.
- 2. Manufacturing costs are necessary (to reduce).
- 3. Kingfisher Industrial is reported (to succeed) in providing a ceramic liner wear protection solution.
- 4. An optional microswitch is said (to integrate) into the machine.
- 5. The turbo group and its auxiliaries are enabled (to operate) in a highly efficient combined cycle mode.
- 6. RockTron is said (to develop) advanced mineral processing technologies.
- 7. One of the 3516 generator sets is reported (to use) during routine maintenance and as a standby unit.

Task VII: Read the information about the use of the infinitive without the particple "to"

The infinitive without the partical "to" is used after:

- 1) modal verbs (except have to, ought to);
- 2) auxiliary verbs;
- 3) after *dare* and *need* used as modal verbs;
- 4) after *let*, *make* (заставлять) and *have* (заставлять);
- 5) after had better, would rather, would sooner, cannot but, nothing but.

Task VIII: Choose the correct answer to the following question:

Which of the sentences is grammatically correct?

a) Standards for vehicle charging stations can be connected to power outlets.

b) Standards for vehicle charging stations can to be connected to power outlets.

Task IX: Choose the correct answer.

- 1. Completion of the smart grid and control center projects will allow the NYISO its core mission.
 - a) fulfill
 - b) to fullfill
- 2. A £38 million wind turbine tower factory has a capacity 300 towers per year.
 - a) manufacture
 - b) to manufacture
- 3. In order to secure onshore wind development the UK should early engagement from stakeholders and clarity of nature conservation concerns.
 - a) seek
 - b) to seek
- 4. Installation proved the biggest challenge of the project.
 - a) be
 - b) to be
- 5. Plug connectors for outdoor power supply systems must a dependable transmission of electric current under rugged conditions.
 - a) ensure
 - b) to ensure
- 6. Air filters are used ventilation equipment.
 - a) protect
 - b) to protect
- 7. Let's review Engena's research in detail.
 - a) review
 - b) to review
- 8. All new buildings have 'zero-energy' requirements by 2020/21.
 - a) meet
 - b) to meet
- 9. It may time some investment and a more cost effective planning focus into offshore wind farm expansion.
 - a) be
 - b) to be

- 10. Target urban planning and related policies could fuel and financing costs.
 - a) reduce
 - b) to reduce

Task X: Put the verb in brackets into the correct non-finite form.

What's Next after Lean?

The application of Lean principles has been instrumental in ...(1)... (help) several companies ...(2)... (survive) during tough economic times. As a business improvement specialist, it is a fantastic feeling $\dots(3)$... (imbue) staff of all levels with my enthusiasm for $\dots(4)$... (see) things differently and \dots (5)... (re-engineer) procedures and practices so that their company can ...(6)... (enjoy) thousands of pounds in savings. However, business improvement should ...(7)... (be) a continuous process. Many businesses have discovered that Six Sigma, a technique pioneered by Motorola in the 1980s has proved ...(8)... (be) extremely beneficial. So, how does it ...(9)... (differ) from Lean? In actual fact, there are many similarities: both focus on ...(10)... (create) value for the customer; both rely on ...(11)... (address) issues by means of cross-functional teamwork. What's different is the manner ...(12)... (achieve) customer value. Lean focuses on ...(13)... (eliminate) waste through ...(14)...(re-engineer) the value stream: Six Sigma concentrates on ...(15)... (reduce) the number of defects and the variation associated with the process. In a nutshell, Lean is a 'bottom-up' technique whereas Six Sigma is a 'top-down' one. Six Sigma is a strategy used ...(16)... (align) business performance with the customer expectations. It uses tools designed ...(17)... (deliver) improvements in customer value, responsiveness, quality, cost and delivery. At the heart of every Six Sigma programme is the desire \dots (18)... (reduce) the number of defects, thus \dots (19)... (contribute) to the bottom line. A defect is classed as anything ...(20)... (result) in customer dissatisfaction – this can ...(21)... (apply) to product quality, design, ...(22)... (process), speed of dispatch, paperwork, etc.

Some examples of root causes of defects in $\dots(23)\dots$ (manufacture) or $\dots(24)\dots$ (process) might $\dots(25)\dots$ (be) equipment condition, i.e. a poorly $\dots(26)\dots$ (maintain) machine $\dots(27)\dots$ (produce) product of variable quality in inadequate quantities. It could also $\dots(28)\dots$ (be) the design of the equipment or the technology $\dots(29)\dots$ (use) is now obsolete, $\dots(30)\dots$ (mean) slower operations and wastage. Or it could $\dots(31)\dots$ (be) that the combination of flow rate, density, pressure, chemical concentration or moisture level setting are out of kilter thereby $\dots(32)\dots$ (affect) the quality or efficiency of a ...(33)... (process) product. ...(34)... (deploy) correctly, Six Sigma can ...(35)... (reap) huge reward for businesses ...(36)... (commit) to the cause, but these can often(37)... (come) in small bites. One such example is the Hartlepool Reactor Plant whose recent Green Belt project(38)... (aim) ...(39)...(achieve) a 'blend first time' culture. The first phase of the Six Sigma programme resulted in ...(40)... (save) almost £45,000 within a very short space of time. The plant generates part containers and/or ex-tanker line material after almost every batch(41)... (produce) on site. Over the years the part containers had not been regularly recharged to subsequent batches and had therefore accumulated across the site. They aimed(42)... (convert) excess part containers for the same product into saleable material; ...(43)... (reduce) the warehouse workload of multiple(44)... (handle);(45)... (reduce) the QC workload by(46)... (reduce) material on site > 1 year old which needed(47)... (re-analyze).

By \dots (48) \dots (apply) the Six Sigma methodology of DMAIC, they were able \dots (49) \dots (achieve) remarkable results.

(from European Process Engineer, November 2011, pp.7-8)

Task XI: Decide whether the underlined part is correct. If it correct – put '+', if it is not correct – write the right form.

- 1. *Comparing* with lobe pumps, diagram pumps gear pumps and piston pumps, the advantages of peristaltic pumps are many.
- 2. *Going* from the lab to production scale has always been a challenge.
- 3. *Controlling* from a digital operating touch pad, the Verso offers excellent reproducibility.
- 4. The new Silver Verso gives clients the ability to start *to scale* accurately with smaller volumes than they were able to previously.
- 5. The 1 hp machine has a *self-pumping* flow rate of 6.5 US gallons/min.
- 6. Our customers wanted a machine that could allow them *streamlining* their scale-up process.
- 7. Customers want to be certain that the *mixing* equipment is optimal for their production process.
- 8. Silverson maintains two *dedicating* test facilities.
- 9. Among the products *highlighted*, SPX showcased its new CIP Midi system.
- 10. It helps customers *choose* the right mixer or customizes one for their particular application

PROGRESS TEST

Task I: Complete the second sentence so that it has a similar meaning to the first sentence, using the word given. Do not change the word given. You must use between *three* and *eight* words, including the word given.

1.	They say the department was set up two years ago. said The departmenttwo years ago.
2.	"It's true that I've been asked to mediate in the dispute," he said. confirmed Hein the dispute.
3.	We don't use innovative methods, that's why it's difficult for us to get funding. Ifthe funding.
4.	We will have to lay off 25 of our employees if we want to reduce our costs. mean Reducing our costs
5.	We will have to lay off 25 of our employees if we want to reduce our costs. mean Reducing our costs25 of our employees redundant.
6.	You didn't minimize the environmental impact because you didn't use alternative kinds of energy. If
7.	When we went back to the lab, they were testing the device. still When we went back to the lab, the device
8.	I could never been persuaded to agree to a theory like that. induce Nothing wouldto a theory like that.
9.	"Okay, we'll approve the grant, but only if you prove the value of new technologies," the company said. agreed The companycondition that they proved the value of new technologies.
10.	They plan to upgrade the communications equipment next year.

	to be The communications equipmentnext year.
11.	The company had no income, because it didn't reduce the costs.
	if The companythe costs.
12.	"We will help to optimize power quality," the company said.
	offered The company power quality.
13.	I don't think repairing the machine is at all useful.
	total I consider repairing the machinetime.
14.	They upgraded our equipment.
	had Weupgraded.
15.	We want to finish the project by Friday, that's why some overtime may be necessary.
	IfFriday deadline, some overtime may be necessary.

Task II. Write a short article devoted to the field of your research. Pay attention to the grammatical peculiarities of the scientific style of speech.

KEYS

UNIT I. GRAMMAR OF ORAL AND WRITTEN TEXTS

Task I

Table 14

Oral Speech	Scientific Style of Speech
elliptical sentences	terms
the omission of the conjunctions	non-elliptical sentences
contractions	impersonality
clichés	passive constructions
emotionality	clichés
expressiveness	direct word order
	impersonal constructions

Task III.

- A. Syntactical Peculiarities
- **B.** Grammatical Peculiarities
- C. Tense Peculiarities

Task IV.

- 1. a
- 2. a

Task VI.

Nanomaterials is a field that takes a materials science-based approach to nanotechnology. It studies materials with morphological features on the nanoscale, and especially those that have special properties stemming from their nanoscale dimensions. Nanoscale is usually defined as smaller than a one tenth of a micrometer in at least one dimension, though this term is sometimes also used for materials smaller than one micrometer.

On 18 October 2011, the European Commission adopted the following definition of a nanomaterial:

A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm–100 nm. In specific cases and where

warranted by concerns for the environment, health, safety or competitiveness the number size distribution threshold of 50 % may be replaced by a threshold between 1 and 50 %.

UNIT II. THE USE OF THE PASSIVE VOICE IN ORAL AND WRITTEN SPEECH

Task I.

Table 15

Active Voice	Passive Voice
has developed	is developed
are developing	was developed
will develop	is being developing
had developed	had been developed
developed	

Task III.

- A. The Formation of the Passive Voice
- **B.** The Use of the Passive Voice

Task IV.

- 1. b
- 2. c

Task V.

- 1. to be analysed and integrated
- 2. are being used
- 3. be included
- 4. are handled
- 5. are discarded
- 6. are being extended
- 7. has been changed
- 8. has been exchanged
- 9. be implemented
- 10. is used

- 11. is stored
- 12. be reconstructed
- 13. be developed
- 14. is accepted
- 15. be incorporated
- 16. be kept
- 17. be evaluated
- 18. be updated
- 19. is handeled

Task VI.

- 1. The equipment is being installed now.
- 2. The radio was invented by Popov in 1895.
- 3. My article was issued yesterday.
- 4. The device had already been tested.
- 5. The elements will have been delivered by Monday.
- 6. The new method for reducing the costs is used.
- 7. The deadline had been completed.
- 8. When I entered the lab yesterday, the machine was being repaired.
- 9. The discussions have already been finished.
- 10. The results will be being analysed at 2 o'clock tomorrow.

Task VII.

- 1. cost
- 2. take
- 3. are based
- 4. be manufactured

- 5. benefit
- 6. are produced
- 7. means
- 8. demand

UNIT III. REPORTED SPEECH

Task I.

- 1. Dr. Sakakibara explains: "Of course, there are a lot of common technologies between industrial robots and service robots in mechanisms, controllers and censors."
- 2. While the number of robots for assisting handicapped people are still relatively low, it is reported that there is a potential for a large increase over the next five to ten years.
- 3. Dr. Shinsuke Sakakibara said that the financial crisis of 2008/2009, which had been the leading cause of the global economic crisis, put a halt to the worldwide trend toward automation.
- 4. The IFR President states that in the industrial robotics field, robot manufacturers are working hard on making programming easier.
- 5. The IFR President goes on to outline other benefits of robotics for manufacturers in European and, of course, elsewhere: "Robots can improve the working conditions for the staff."

Table 16

Direct Speech	Reported Speech
1,4	2,3,5

Task III.

- A. The Notion of Reported Speech
- **B.** Sequence of Tenses
- C. Style Peculiarities of Direct and Reported Speech
- **D.** Reported Statements
- E. Reported Orders and Questions

Task IV.

- 1. b
- 2. a
- 3. b
- 4. b
- 5. a

Task V.

- 1. +
- 2. +
- 3. had led
- 4. +
- 5. were
- 6. +
- 7. +
- 8. produce
- 9. +
- 10. +

Task VI.

- 1. had taken/ took
- 2. was not installed/ had not been installed
- 3. were going
- 4. had ever heard
- 5. could relieve
- 6. wants
- 7. wrote/ had written

Task VII

- 1. their customers demanded for
- 2. we should prevent
- 3. were thinking about the ways in which that technology

- 4. ordered to install the equipment the following
- 5. promised to optimize
- 6. had a potential to compete
- 7. According to the consortium, IO-Link promised
- 8. it was not necessary

UNIT IV CONDITIONALS

Task I.

Table 17

Real Events	Unreal Events
1,4	2,3,5

Task III.

- A. Zero Conditional and the First Conditional
- C. The Second Conditional, the Third Conditional and Mixed Types of Conditionals

Task IV.

- 1. d
- 2. b

Task V.

- 1. c
- 2. e
- 3. b
- 4. c
- 5. a
- 6. a
- 7. a
- 8. d
- 9. c
- 10. b
- 11. e
- 12. d
- 13. b
- 14. a
- 15. c
- 16. d

- 17. e
- 18. b
- 19. c
- 20. d

Task VI.

- 1. had been
- 2. will
- 3. brings
- 4. correct
- 5. correct
- 6. would
- 7. correct
- 8. gets
- 9. had
- 10. correct
- 11. were
- 12. correct
- 13. would work
- 14. is maintained
- 15. hits

Task VIII.

- 1. would know
- 2. had been
- 3. were
- 4. figure out
- 5. had been
- 6. had
- 7. have
- 8. had been
- 9. encompasses
- 10. were
- 11. tilts
- 12. had been
- 13. would expect
- 14. will be

Task IX.

- 1. If the wave strikes the obstacle not at a right angle, it is reflected directly backwards.
- 2. If the MMS 35 IS were purchased with the internal sample system package, it wouldn't require an external moisture probe connected to the hygrometer through a cable.
- 3. If the user wishes, the HF8 can't be integrated into an RS485 network.
- 4. If the equation were based on the natural numbers, some of these operations wouldn't be valid as negative.
- 5. If the y values decreases, the equation is decreasing.

UNIT V. THE NON-FINITE FORMS OF THE VERB (VERBALS)

Task I.

Table 18

Verbals	Finite Verbs
investigating	was investigated
having investigated	had investigated
being investigated	will investigate
to investigate	has investigated
having been investigated	investigated
investigated	

Task III. b)

PART I. PARTICIPLES

Task I.

Table 19

Participle I	Participle II
2,3,5	1,4

Task III.

- **A.** Tes of Participles
- **B.** Participles I and II

Task IV.

- 1. a)
- 2. b)

Task V.

- 1. used
- 2. reducing
- 3. known
- 4. adapted
- 5. suited
- 6. contributing
- 7. developed
- 8. delivering
- 9. recording
- 10. compared

Task VI.

- 1. The radar providing early warning of impending floodwater measures the river level with a precision of ± 2 mm.
- 2. SITRANS LR560's plug and play performance is ideal for most solid applications including those with extreme dust and high temperatures to 200°C.
- 3. The advanced 'echo marker' signal processing provides a reliable continuous pulse shape unaffected by environmental conditions.
- 4. The transmitter includes an optional graphical local display interface improving setup and operation.
- 5. Pressure-dependant changes in capacitance caused by membrane movement are measured at the electrodes of ceramic carrier.
- 6. Energy-saving measures are achieved through waste heat recovery devices including flue gas heat exchangers, flue gas condensers or heat exchangers for residualblow-down and vapor coolers.
- 7. Portable gauging units designed to be used in many different tanks can be calibrated in a laboratory independent of the tank.

Task VIII. c)

Task IX.

- 1. indefinite passive
- 2. perfect active

- 3. indefinite active
- 4. perfect passive
- 5. indefinite passive
- 6. perfect active
- 7. perfect passive
- 8. indefinite active
- 9. perfect active
- 10. indefinite active

Task X.

- 1. Having examined
- 2. introduced
- 3. Hearing
- 4. having been introduced
- 5. Having done
- 6. incorporating
- 7. having done
- 8. working
- 9. having been tested
- 10. designed

Task XII. b)

Task XIII.

- 1. Single-use bags can be less costly to purchase if being with reusable bags.
- 2. Senior management having taken a more active role in process safety policy, they find that it can in actual fact save the company money.
- 3. Trials carried out on compounds containing Hyperform HPR-803 have already shown that it is possible to produce parts with a shorter cooling time.
- 4. More and more automotive OEMs are using STAMAX LGFPP resins in structural applications, the material delivering high-quality performance.
- 5. The hopper charges the intake adapter of an integral flexible screw conveyor if equipped with a hinged door to access the interior safety.
- 6. It must be possible to verify and recalibrate the gauging instruments used during custody transfer operations.

- 7. Meeting the Fiat Group Automobiles technical requirements, Arnitel PB-500H offers a cost advantage over current solutions.
- 8. Identification of plant and processes is the first step in managing process safety being both critical to site safety and the business.
- 9. The biotechnology industry consisting mainly of small start-up enterprises is a good example for the overlap and partial fusion of disciplines.
- 10. Company resources are not necessarily targeted to best effect if not properly directed.

PART II. GERUND

Task I.

Table 20

Gerund	Finite Verb
1,3,4	2,5

Task III.

- **A.** General Notion and Forms
- **B.** The Use of the Gerund

Task IV.

- 1. a
- 2. c

Task V.

- 1. increasing
- 2. having got
- 3. handling
- 4. using
- 5. having been given
- 6. writing
- 7. having financed
- 8. being affected

Task VII. b)

Task VIII.

1. _ 2. +3. + 4. – 5. + 6. – 7. + 8. + 9. + 10. + 11. – 12. + 13. – 14. + 15. – 16. + 17. – 18. + 19. – 20. +

PART III. THE INFINITIVE

Task I.

Table 21

Infinitive	Finite Verb
to have investigated to be investigated to investigate	has investigated have investigated investigated is investigated

Task III.

- A. General Notion and Forms
- **B.** The Use of the Infinitive

Task IV.

- 1. b
- 2. c

Task V.

- 1. indefinite active
- 2. perfect active
- 3. indefinite passive
- 4. indefinite passive
- 5. perfect passive
- 6. indefinite passive
- 7. perfect passive
- 8. indefinite passive

Task VI.

- 1. to exchange
- 2. to be reduced
- 3. to have succeeded
- 4. to have been integrated
- 5. to be operated
- 6. to have developed
- 7. to have been used

Task VIII. B)

Task IX.

- 1. b
- 2. b
- 3. a
- 4. b
- 5. a
- 6. b
- 7. a
- 8. b
- 9. a
- 10. a

Task X.

- 1. helping
- 2. to survive

- 3. to imbue
- 4. seeing
- 5. re-engineering
- 6. enjoy
- 7. be
- 8. to be
- 9. differ
- 10. creating
- 11. addressing
- 12. to achieve
- 13. eliminating
- 14. re-engineering
- 15. reducing
- 16. to align
- 17. to deliver
- 18. to reduce
- 19. contributing
- 20. resulting
- 21. apply
- 22. processing
- 23. manufacturing
- 24. processing
- 25. be
- 26. maintained
- 27. producing
- 28. be
- 29. used
- 30. meaning
- 31. be
- 32. affecting
- 33. processed
- 34. having deployed
- 35. reap
- 36. committed
- 37. come
- 38. aimed
- 39. to achieve
- 40. saving
- 41. produced
- 42. to convert
- 43. to reduce

- 44. to handle
- 45. to reduce
- 46. to reduce
- 47. to be re-analyzed
- 48. applying
- 49. to achieve

Task XI.

- 1. compared
- 2. +
- 3. controlled
- 4. +
- 5. +
- 6. to streamline
- 7. mixed
- 8. dedicated
- 9. +
- 10. +

PROGRESS TEST

Task I.

- 1. is said to have been set up
- 2. confirmed having been asked to mediate
- 3. If we used innovative methods, we would get
- 4. will mean making
- 5. suggested our ordering
- 6. If you had used alternative kinds of energy
- 7. was still being tested
- 8. induce me to agree
- 9. agreed to approve the grant on
- 10. is planned to be upgraded
- 11. would have had income if it had reduced
- 12. offered to optimize
- 13. to be a total
- 14. had our equipment
- 15. we want to meet

GLOSSARY

A

adjective clause

адъективированное придаточное, т. е. придаточное, употребляемое в функции определения

adverbial modifier of cause обстоятельство причины

adverbial modifier of condition обстоятельство условия

adverbial modifier of result обстоятельство результата

adverbial modifier of time обстоятельство времени

attruibute определение

B

brevity краткость

С

coincide совпадать

complex sentence сложноподчиненное предложение

compound sentence сложносочиненное предложение

conditional придаточное условия

conjunction союз

contraction сокращение

direct speech

прямая речь

Е

D

emphasize подчеркивать

extended sentence распространенное предложение

G

gerund герундий

Ι

indirect speech

косвенная речь

infinitive инфинитив, неопределенная форма глагола

irrelevant

несущественный

L

looseness неточность, неопределенность

Ν

non-elliptical sentence

полное предложение, т. е. предложение, в котором имеются подлежащее и сказуемое

non-finite form of the verb неличная форма глагола notional

смысловой

obvious

очевидный

omission

удаление, опущение чего-либо в тексте

Р

0

participle

причастие

passive voice

пассивная форма глагола

prior

перед, до

R

S

U

V

recipient

адресат

reported speech

косвенная речь

simultaneous

одновременный

strict

строгий

utterance

высказывание

verbal

неличная форма глагола

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