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IT TECHNOLOGIES: CAREER PATH IN MODERN BUSINESS

Учебно- методическое пособие по английскому языку

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IT TECHNOLOGIES: CAREER PATH IN MODERN BUSINESS - это учебно-методическое пособие для общеобразовательной и профессионально-ориентированной подготовки по английскому языку магистрантов по специальности 11.04.02 «Инфокоммуникационные технологии и системы связи», 09.04.01 «Информатика и вычислительная техника», 09.04.04 «Программная инженерия», 12.04.03 «Фотоника и оптоинформатика», 38.04.05 «Предпринимательство и организация бизнеса в сфере информационных технологий», а также специалистов в области информационных технологий, которые хотят улучшить свои навыки общения на английском языке для академического и профессионального взаимодействия в рабочей среде, способного анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия. Данное учебно-методическое пособие состоит из 5 юнитов, освещающих различные аспекты развития карьеры в сфере информационных технологий и коммуникаций, а также тренировочные лексические и лексико-грамматические упражнения, необходимые для осуществления профессионального общения. Каждый юнит содержит аутентичный текст для формирования и совершенствования знаний, умений и навыков, обозначенных рабочей программой по дисциплине, направленный на формирование универсальных компетенций, обозначенных ФГОС 3++ (УК - 4, 5, 6).

Content

Unit 1.	WHAT IS INFORMATION TECHNOLOGY?	4
Unit 2.	IMPORTANCE OF INFORMATION TECHNOLOGY IN BUSINESS AND ITS NEW ROLE	10
Unit 3.	DIGITAL BUSINESS ANT ITS MODAL TYPES	17
Unit 4.	BIG DATA IMPORTANCE	24
Unit 5.	BUSINESS INTELLIGENCE	31
Appendix 1	VOCABULARY	38
Appendix 2	KEYS	42

UNIT 1. WHAT IS INFORMATION TECHNOLOGY?

Vocabulary

Directions: Study the following keywords and definitions.

1. **Bedrock** (n) -основа, фундамент.
2. **Hardware** (n) – аппаратные средства информатизации, «железо».
3. **Software** (n) - программное оборудование, софт .
4. **Brainware** (n) - разработка ПО.
5. **To retrieve** (v) - выполнить поиск и выборку.
6. **To transmit** (v) – передавать данные.
7. **To manipulate data** (v) - оперировать данными.
8. **To overtake** (v) – опережать.
9. **To be responsible for** (v) – быть ответственным за.
10. **Business objectives** –бизнес-цели.
11. **Implementation** (n) - ввод в работу, внедрение.
12. **Long-term goal** –перспективная цель, долгосрочные цели.
13. **To be broken down into** (v) – разделяться на, делиться на части.
14. **Front-end development** - разработка клиентской части приложений.
15. **Back-end development** - разработка серверной части приложений.
16. **IT apprenticeships** - профессиональное обучение без отрыва от производства.
17. **IT internships** - преддипломная практика.
18. **Involve** (v) – включать в себя, касаться.
19. **Stepping-stone** (n) - средство для достижения цели, улучшения положения.
20. **Consumer** (n) – потребитель.

Reading comprehension section

What is Information Technology?

Information Technology is the bedrock of today's society. IT has many branches including hardware, software, brainware, coding and data, which form this digital entity. Computers, smartphones and other devices are used to store, study, retrieve, transmit and manipulate data both in a professional and personal context.

The term 'information technology' was established by the Harvard Business Review, in order to make a distinction between purpose-built machines designed to perform a limited amount of functions with general-purpose computing machines that can be programmed for various tasks.

IT includes hardware, software and brainware. Hardware is focused on the physical elements involved with IT, whereas software is concerned with automation tools, operating systems and applications. As for brainware, it accurately sorts paper and electronic documents and seamlessly pass content to your core business applications. This allows you to more efficiently process documents, even different file types, in different languages, across different departments. And with no templates to build, it's the fastest and most accurate way to capture content on the front end and deliver it wherever you need it.

Opportunities in Information Technology

There are many different roles available in IT, so if you're looking to start a career there are sure to be a number of opportunities to suit your skills, personal characteristics and lifestyle. The most common job roles include:

IT Consultant. An IT Consultant is responsible for dealing directly with clients and advising them on how to use IT to meet the business objective and resolve problems effectively with efficiency.

Applications Developer. The role of an Applications Developer is to translate software requirements into workable code, combined with the maintenance and development of programs for organizational use.

Network Engineer. A Network Engineer's role focuses on the communication network through the implementation, maintenance, support and development of a communication network within an organization.

IT Trainer. An IT Trainer is responsible for designing, delivering and implementing training programmes related to information technology.

IT Sales Professional. An IT Sales Professional may be part of three components of the sale process; pre-sales, sales and post-sales support of hardware and software. IT Sales Professionals are in direct contact with clients, providing information about technical specifications, the ways in which IT can meet their needs and any potential IT solutions that can resolve any problems.

Business Analyst. A Business Analyst is responsible for helping to manage change and plan for the long-term goals of an organization.

Games Developer. A Games Developer is responsible for the creation and developments of games for computers, consoles, mobile and tablet devices and arcades. There are two distinguishing components of games development: design and programming. As a Games Developer, you will be involved with either of these areas.

Web Developer. A Web Developer's role focuses on building and maintaining websites and web applications. Web development responsibilities can be broken down into front-end development or back-end development.

IT Technical Support Officer. IT Technical Support Officers monitor and maintain the computer systems and networks of an organization and depending on the size of the company, your role may span one or more areas of expertise.

How to start a career in Information Technology

There are many routes in Information Technology, from undergraduate degrees to graduate schemes, IT apprenticeships, IT internships and information technology diplomas - there is an educational style to suit everyone with a passion for IT.

If you're looking to complete a degree in information technology, there are many degrees to be found online at UCAS (Universities and Colleges Admissions Service <https://www.ucas.com/>). Each university will have different entry requirements, therefore it is recommended to check with the course provider before you apply.

Graduate schemes are also available with major companies as well as small to medium enterprises. Graduate schemes are only available to individuals who have

graduated from an undergraduate degree to provide a stepping-stone into employment.

IT apprenticeships are another route into the IT industry. An apprenticeship is an ideal route for individuals looking to gain an IT qualification without going to university and earn a salary at the same time. Apprenticeships will teach you hands-on experience in the industry as well as gaining the essential knowledge you need to succeed in the sector. Some apprenticeships can also lead to direct employment within the organization the apprentice is training at. There are four levels of apprenticeship:

- Intermediate: equivalent to five GCSEs (General Certificate of Secondary Education) at grades A* to C.
- Higher – equivalent to a foundation degree or above
- Advanced: equivalent to two A-Level passes.
- Degree apprenticeships - equivalent to a Bachelors or Masters Degree.

Other alternative routes include gaining a relevant diploma or qualification by an accredited awarding body. Not only can an accredited qualification or diplomas provide an entry route into the information technology industry, but they can also equip professionals with advanced skills and validate their level of ability and competency.

Question 1: Suggest a different title for this text. Why do you think that this would make a good title?

Question 2: What connections can you make between the text and other texts, information, or experiences?

Question 3: If you were asked to edit this text down to half its length, what details would you remove?

Question 4: What is the main idea of this text? What details from the text support the main idea?

Question 5: Write 3-5 sentences summarizing the text.

Focus on Grammar

The **simple present** is used in 3 cases.

1. General truths: "The sun rises in the east."
2. Habits: "I drink coffee every morning."
3. Conditions: "Today is sunny."

Task 1.1: Identify how the simple present is used in the sentence(s) below

1. IT includes both hardware and software.
2. A Web Developer's role focuses on building and maintaining websites and web applications.
3. IT Technical Support Officers monitor and maintain the computer systems and networks of an organization and depending on the size of the company, your role may span one or more areas of expertise.

4. IT has many branches including hardware, software, coding and data, which form this digital entity.
5. A Games Developer is responsible for the creation and developments of games for computers, consoles, mobile and tablet devices and arcades.

Word Roots & Stems

Rule: The suffix - **er** adds "one who" to the meaning of a word, like a *driver*.

Task 1.2.: Fill in the blanks below, just as in the models. Give your examples.

actor	act + or	Denzel Washington is her favourite actor.
fighter		
dancer		
builder		
painter		
teacher		

Vocabulary Practice

Task 1.3.: Use the word bank to identify the word that best completes the sentence.

business objectives	brainware	be responsible for	retrieve
bedrock	involve	hardware	long term goals
implementation	manipulate data	stepping stone	transmit

1. The program allows you to ... items quickly by searching under a keyword..
2. The radio stations ... radio shows 24 hours a day.
3. Please don't ... me in your argument.
4. Manhattan has a thick layer of ... that provides the foundation for tall buildings.
5. Computer ... includes the physical, tangible parts or components of a computer, such as a cabinet, central processing unit, monitor, keyboard, computer data storage, graphics card, sound card, speakers and motherboard.
6. ... is a set of objects providing a web-based set of groupware tools (mail, FTP, IRC, calendar, forum, and H323 video conference for the time being), creating a knowledge workplace for organizations of any size.
7. Multimedia primarily used to define applications and technologies that, text, images, and voice and full-motion video objects.
8. The Joint Technical Secretariat implementing the Information and Communication Plan
9. The primary of BGK is to provide banking services for the public finance sector
10. A compilation of the results achieved in support of has been provided to the Director-General and shared with the Executive Board annually.
11. We see this as a for closer collaboration in the future.

12. These could include evaluating the impact on the environment resulting from the ... of the programme

Task 1.4.: Write the letter of a word that matches the definition.

<p>A. Bedrock B. Software C. To transmit D. To overtake E. To be responsible for F. Long-term goals G. To be broken down into H. Front-end development I. Back-end development J. IT apprenticeships K. IT internships L. Stepping-stone</p>	<p>1. something that allows you to make progress or begin to achieve something 2. something that refers to the server-side of an application and everything that communicates between the database and the browser 3. goals that will last or have an effect over a long period of time 4. to separate idea or statement or a group of people into smaller parts in order to make it easier to understand or deal with 5. a strong base for something, especially the facts or the principles on which it is based 6. the system of learning a new skill in the IT-sphere 7. to become greater in number, amount or importance than something else, being the cause of something 8. the programs, etc. used to operate a computer 9. to send an electronic signal, radio or television broadcast, etc. 10. components and features that are indirectly accessed by a user through a front-end application or system 11. a period of time during which a student or new graduate gets practical 12. being the cause of something.</p>
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Task 1.5.: For each of the words in the box, write an original sentence using the word. Circle the vocabulary word in each sentence. Be sure to write a sentence that would help the reader better understand the meaning of the word.

implementation	be responsible for	manipulate data	retrieve	transmit
bedrock	involve	hardware	back-end development	brainware

stepping stone	front-end development	long term goals	to be broken down into	business objectives
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Task 1.6. Translate sentences from Russian into English

1. Информационные технологии это процесс, использующий совокупность средств и методов сбора, обработки и передачи данных для получения информации.
2. Компьютеры, смартфоны и другие устройства используются для хранения, изучения, извлечения, передачи и манипулирования данными как в профессиональной, так и в личной сфере деятельности.
3. Понятие ИТ включает в себя аппаратное обеспечение, программное обеспечение и интеллектуальное оборудование.
4. Термин «информационные технологии» впервые появился в Harvard Business Review, чтобы различать специализированные машины, предназначенные для выполнения ограниченного количества функций с вычислительными машинами общего назначения, которые могут быть запрограммированы для различных задач.
5. На предприятиях различных сфер деятельности информационные технологии, как правило, связаны с решением краткосрочных и долгосрочных задач бухгалтерского учета, накоплением информации по отдельным видам бизнес-процессов, созданием информационных баз данных по направленности деятельности фирмы и организации.

UNIT 2 IMPORTANCE OF INFORMATION TECHNOLOGY IN BUSINESS AND ITS NEW ROLE

Vocabulary

Directions: Study the following keywords and definitions.

1. **Typewriter (n)** - пишущая машинка, машинистка, печать.
2. **Carbon sheets (n)** - копия через копирку.
3. **Burgeoning technology (n)** – быстро растущая (развивающаяся) технология.
4. **Dizzying pace (phr)** - головокружительный темп.
5. **Acquisition (n)** - вступление во владение; присоединение к компании другого юридического лица.
6. **To comprise (v)** - включать, заключать в себе, составлять.
7. **To encompass (v)** – охватывать, включать в себя.
8. **Retrieve (n)** - поиск (информации)
9. **Spreadsheet (n)** - динамическая таблица; программа табличных расчётов; электронная таблица.
10. **Databases (n)** - заносить информацию в базу данных; информационная база данных.
11. **Overstate (v)** – преувеличивать.
12. **Under the umbrella (prep)** - под егидой, в рамках.
13. **Executable programs (n)** - исполнимая программа (программа, готовая к исполнению на данном компьютере. Для этого её исходный текст транслируется в объектный модуль, который затем компонуется с библиотеками времени исполнения)
14. **Ubiquitous (adj)** - повсеместно доступный, общедоступный.
15. **To keep tabs on** - следить за кем-либо/чем-либо.
16. **To keep a watchful eye on** - внимательно следить за.
17. **To trim costs (v)** - сокращать расходы, урезать цены.
18. **To utilize resources (v)** - использовать ресурсы.
19. **Real-time inventory** – система учёта в режиме реального времени.
20. **E-commerce (n)** - торговля по Интернету, покупки и продажи через интернет.

Reading

Importance of Information Technology in the Business Sector

Just 25 years ago, most business offices would have been stocked with typewriters and carbon sheets, instead of computers and printers. Once computers became mainstream consumer items, the business world adopted the burgeoning technology at a dizzying pace. The modern economy places a premium on the acquisition, processing and proper use of information in all its forms and formats. Today, the sum of all computer-based and digital technology used for the management of

information in both the public and private sectors is referred to as information technology, or IT. Information technology is responsible for innovative leaps and improvements to the workplace across multiple sectors of the market and plays a critical role in business organizations.

What Is Business Information Technology?

The systems that comprise information technology in a business today encompass a number of types of computers, storage and networking equipment. In fact, one definition of business information technology is the use of any computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data.

IT, therefore, includes any mechanical or digital method by which a business office collects, maintains, retrieves or uses information. In this context, information can mean written content, documents, databases, spreadsheets, emails, audio or video files, digital forms that are completed and submitted via the internet, and much more.

Importance of IT in Business

It is difficult to overstate the importance of information technology in today's business climate. No matter what industry it belongs to, a business' lifeblood in today's economy is the information that makes it possible for it to conduct business. Businesses utilize IT in a number of different contexts and for many different purposes. In other words, IT is not just computers. For example, telephones, radio equipment and VOIP services used for vocal communications are included under the IT umbrella. In the same way, peripherals such as printers, copiers, scanners and 3D printers are also considered part of a business' IT systems.

Of course, when most people think IT, they think of computers: desktop machines, laptops and mobile devices used by individuals to input and manipulate data, create digital documents, conduct research, and more. IT also includes the applications and executable programs that are installed on these devices to enable the user to complete the task at hand. Somewhat less obviously, IT may also include the costs associated with purchasing, configuring and maintaining the necessary hardware and equipment to keep the company's IT systems operating smoothly. In these ways, IT has become critical to the global business community.

Role of Information Technology in an Organization

The role of information technology in various sectors has evolved quickly since the last decade of the 20th century. Modern organizations use information technology throughout most, if not all, departments and across most functions. The obvious example is email. The email has become ubiquitous in connecting employees to each other, between departments and between locations or markets. This is true whether a business is local with a single point of presence or maintains offices in multiple locations in multiple countries.

However, IT goes far beyond mundane operations. The right IT systems give companies a competitive edge, enabling them to enter larger markets and expand products or service lines more efficiently, as well as keep tabs on competitors. IT has now become such a pervasive aspect of business operations that many employees and managers no longer see it as a separate function. Rather, IT has become an

indispensable element of every corporate department and function, driving innovation and fostering growth throughout the entire organization.

Information technology in business helps a corporation maintain a watchful eye on expenses and profits, enabling management to act more nimbly to trim costs or to change the sales team's focus when necessary. A strong IT system also helps all facets of a company work more productively. By enabling automation and digital tools, tasks that once took hours can now be performed in a matter of minutes. Today's agile businesses weave IT into everything they do, enabling them to accomplish more in a shorter amount of time.

Role of Information Technology in Business

Over the past few years, IT has replaced the conventional modes of businesses with innovative technological tools. In addition to the increased output and efficiency, IT has introduced new roles such as:

Productivity

Technological applications, such as relational database technology, computer-aided designing, word processing, spreadsheets and another software programming, increase productivity of businesses.

Significance

Business corporations maximize their commercial advantage by making the right use of IT tools. For instance, Michael Dell, founder of Dell Inc., introduced the online selling concept for personal computers. Today, customers around the globe order Dell products from the comfort of their homes via the Internet.

Monitoring

IT is used for monitoring areas of the company that are not utilizing resources efficiently. For instance, Dell made use of real-time inventory and supply monitoring to produce only that number of computer systems that were demanded by Dell customers, reducing the cost of overproduction.

Business Performance Management

According to bestpricecomputers.co.uk, BPM is defined as a management culture, which helps businesses to optimize their performance by analyzing processes using applications like OLAP (Online Analytical Processing), and EIS (Executive Information Systems).

E-commerce

E-commerce is buying and selling services and goods over the Internet. Online operations reduce the time and personnel required for business processes. It also reduces costs in areas like labour, document preparation, telephoning, and mail preparation.

Question 1: Suggest a different title for this text. Why do you think that this would make a good title?

Question 2: What part of the text is hard for you to understand? What do you think it means?

Question 3: What is the main idea of this text? What details from the text support the main idea?

Question 4: Write 3-5 sentences summarizing the text.

Question 5: What is the tone of this text?

Focus on Grammar

The Present Perfect is used to describe:

- An action or situation that started in the past and continues in the present. *I have lived in Bristol since 1984* (= and I still do.)
- An action performed during a period that has not yet finished. *She has been to the cinema twice this week* (= and the week isn't over yet.)
- A repeated action in an unspecified period between the past and now. *We have visited Portugal several times.*
- An action that was completed in the very recent past, expressed by 'just'. *I have just finished my work.*
- An action when the time is not important. *He has read 'War and Peace'.* (= the result of his reading is important)

Note: When we want to give or ask details about when, where, who, we use the simple past.

Task 2.1. Identify how the present perfect is used in the sentence(s) below:

1. IT has replaced the conventional modes of businesses with innovative technological tools.
2. The role of information technology in various sectors has evolved quickly since the last decade of the 20th century.
3. In these ways, IT has become critical to the global business community.
4. The email has become ubiquitous in connecting employees to each other, between departments and between locations or markets.
5. In addition to the increased output and efficiency, IT has introduced new roles.
6. Rather, IT has become an indispensable element of every corporate department and function, driving innovation and fostering growth throughout the entire organization.

Word Roots & Stems

Rule: The prefix re- adds "again" or "back" to the meaning of a word. This is one of the most common prefixes and can be correctly added to most verbs.

Task 2.2.: Identify the word that ends with re- in each sentence and write it on the line.

1. Today, the sum of all computer-based and digital technology used for the management of information in both the public and private sectors is referred to as information technology.
2. Information technology is responsible for innovative leaps and improvements to the workplace across multiple sectors of the market and plays a critical role in business organizations.

3. IT, therefore, includes any mechanical or digital method by which a business office collects, maintains, retrieves or uses information.
4. Information technology is responsible for innovative leaps and improvements to the workplace across multiple sectors of the market and plays a critical role in business organizations.

Task 2.2.1.: Fill in the blanks below, just as in the models.

reapply	re + apply	He wasn't accepted this year but he will reapply next year.
refill	re + fill	Refill the cup if you spill the water.
reorganize		
reheat		

Vocabulary Practice

Task 2.3: Use the word bank to identify the word that best completes the sentence.

encompasses	retrieve	keep a watchful eye on	burgeoning
e-commerce	acquisition	database	comprises
overstated	spreadsheet	typewriter	ubiquitous

1. We maintain a ... of all our clients.
2. I created a ... to help analyses the sales data.
3. It ... the complete learning process, including learning styles and strategies.
4. Visible light ... only a minute fraction of the electromagnetic spectrum.
5. Computers are used to store and ... information efficiently.
6. However, how to make ... intelligent and the customers more satisfied remains a big issue.
7. The company will fund the ... from its existing cash resources.
8. I think we need to the real thing to make sure she fades away to nothing.
9. The company hoped to profit from the ... communications industry.
10. To improve the readability of code, we use an italic ... font for object language programs.
11. Nonetheless, two factors indicate that these advantages can
12. The mobile phone, that most ... of consumer-electronic appliances, is about to enter a new age.

Task 2.4.: Write the letter of the word that matches the definition.

A. Carbon sheets B. Dizzying pace C. Under the umbrella	1. watch carefully to make sure there are no problems. 2. very fast or confusing development
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<p>D. Burgeoning technology E. Executable programs F. To encompass G. Ubiquitous H. To keep tabs on I. To keep a watchful eye on J. To trim costs K. To utilize resources L. Real-time inventory</p>	<p>3. found or existing everywhere; seeming to be everywhere 4. an executable file is one that contains a program. 5. to include several different things. 6. a copy of a written document that is made using carbon paper (= thin paper covered in carbon). 7. a source of past, present and future tech news and updates from around the globe 8. the system of good planning of production and an accurate estimate of consumer demand 9. the reduction of plant and equipment with a minimum reduction in production 10. to watch someone or something carefully to check they do nothing wrong. 11. If something happens under particular circumstances or conditions, it happens when those circumstances or conditions exist. 12. to use something in an effective way</p>
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Task 2.5.: For each of the words in the box, write an original sentence using the word. Circle the vocabulary word in each sentence. Be sure to write a sentence that would help the reader better understand the meaning of the word.

encompasses	retrieve	spreadsheet	burgeoning	database
to keep a watchful eye on	acquisition	to utilize resources	comprises	to trim costs
overstated	e-commerce	Burgeoning technology	ubiquitous	to keep a watchful eye on

Task 2.6. Translate sentences from Russian into English

1. Агенты, используемые в приложениях электронной коммерции, могут заключать контракты или делать ставки на аукционах от имени своих пользователей.
2. Было много дополнительных расходов, связанных с приобретением компании Walker Software.

3. База данных имеет множество оценок в области профилактики, большинство из которых являются систематическими обзорами.
4. Мы разработали язык спецификации шаблонов, который позволяет определять шаблоны электронных таблиц, которые описывают возможные эволюции электронных таблиц.
5. Следи за программами, пока меня не будет, пожалуйста.

UNIT 3 DIGITAL BUSINESS AND ITS MODAL TYPES

Vocabulary

Directions: Study the following keywords and definitions.

1. **Interact (v)** – взаимодействовать
2. **Maintenance (n)** - обслуживание, содержание
3. **Network (n)** - сеть.
4. **Proxy (n)** – проводник.
5. **Transact (v)** - заключить сделку.
6. **Sophisticated (adj)** - сложный, тонкий
7. **Unprecedented (adj)** - беспрецедентный
8. **Embedded (v)** - встроенный.
9. **Assume (v)** - предполагать.
10. **Innovation (n)** - нововведение, новшество.
11. **Infrastructure (n)** - инфраструктура
12. **Apparel store (n)** – магазин одежды.
13. **Substitute (n)** - заместитель, замена.
14. **Enterprise (n)** - предприятие
15. **Business model (n)** - бизнес-модель; модель деловой деятельности, коммерческая модель, модель бизнес-процесса.
16. **Compete (v)** - конкурировать
17. **Assets (n)** - имущество.
18. **Arrangement (n)** - договоренность.
19. **Boundaries (n)** – граница.
20. **Convergence (n)** – взаимодействие

Digital Business is Everyone's Business

By Jorge Lopez

By 2020, more than seven billion people and businesses, and at least 30 billion devices will be connected to the Internet. With people, businesses and things communicating, transacting, and even negotiating with each other, a new world comes into being - the world of digital business.

Digital business is the creation of new business designs by blurring the digital and physical worlds. It promises to usher in an unprecedented convergence of people, business and things that disrupts existing business models - even those born of the Internet and e-business eras.

What makes digital business different from e-business is the presence and integration of things, connected and intelligent, with people and business. This could be the incorporation of greater intelligence and sensors into jet aircraft engines to improve passenger jet performance and to reduce the need for aircraft maintenance. In retail, a digital business could involve providing retail fashion customers a world with seamless integration between the digital and physical that blends the boundaries between the two. For example, a customer would enter a retail apparel store, try on a coat, and the storage systems would know this had happened. They would then

project an image of the buyer on a screen with the coat on and propose some accessories or alternatives that would go well with the new clothes, all the time taking into consideration any price limits placed by the customer in the process of discussing their purchases.

Another example would be the ability to reassess loan portfolio risk for a bank with real-time reporting directly from financed physical assets. This could happen, for example, in the course of a car crash. Systems on the car would not only let the first responders know of the crash and the condition of the occupants and the car, but they would also notify the bank, so it can assess its risk portfolio in real-time. Say the owner was in no condition to make payments if they were not directly working—that would say the bank needs to prepare for loan default.

Some may confuse the Internet of Things with digital business. The Internet of Things plays a crucial role in digital business, but it is much more than this. The Internet of Things as Gartner defines it, is the network of physical objects that contain embedded technology to communicate and interact with their internal states or the external environment.

Digital business is about the creation of new business designs by blurring the physical and digital world. It is about the interaction and negotiations between, business, and things. It is when things start to negotiate amongst themselves as well as people and business that we start to see how we have entered an entirely new and disruptive world. In the past, people were a proxy for things in business. In the future, things will be an agent for themselves and will thus shift that way business views its opportunities.

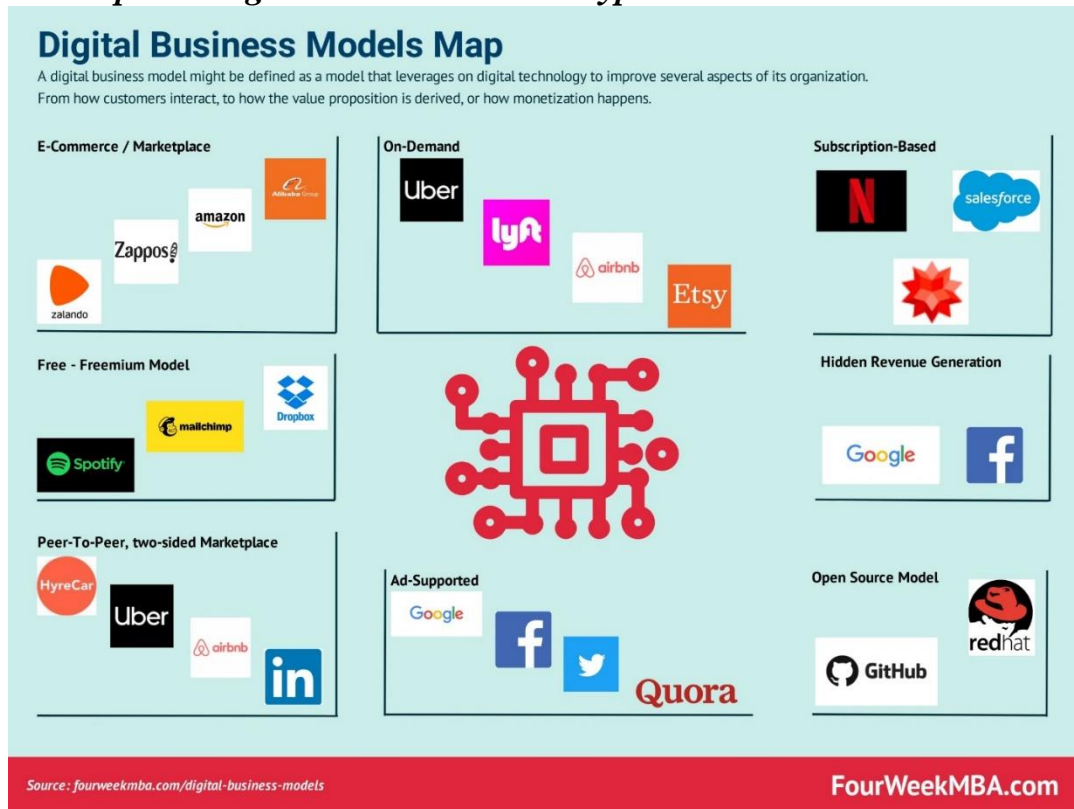
Successful business leaders will need digital business skills. In 2020, digital leadership skills will be assumed for all business leaders and on a par with other executive skills such as finance. In 2020, the new digital business technology organization will coordinate the business-critical digital business architectures and back-office IT.

Digital technology drives improvement at the traditional business process and business model levels. However, the differentiating fight will be for “business moments” - the third level of digital reinvention created by the need to compete with increased speed and agility. Technologies such as the Internet of Things and 3D printing will enable new digital business processes, models and moments.

For example, a critical part shipped from Canada could find itself stopped at the border as customs agents decide to further examine a line of trucks containing goods for the US. The critical part would know it is not moving because it would have GPS as well as some amount of intelligence to know it needs to be at a destination in a time shorter than left with the delay. The part would then communicate via the Internet to find other parts like itself that could be rerouted and substitute for the one that is delayed. At the same time, arrangements would be made to reroute the delayed part to the customer who did not have the time-critical need.

Organizations that excel in the digital industrial economy will be those that can become more technologically capable and sophisticated. Their digital stories will be written in technology.

The Most Popular Digital Business Model Types



A digital business model might be defined as a model that leverages digital technology to improve several aspects of an organization. From how customers interact, to how the value proposition is derived, or how monetization happens.

We all like to think of digital business models as innovative in their own sake. However, in many cases innovation happens by combining aspects from existing business models to create a unique formula.

Key advantages of all these business model types are:

- quick and effective development via a global community of qualified contributors which are not on the company's balance sheet;
- great distribution via free licensing of its software;
- paid subscriptions for premium and enterprise customers;
- strong enterprise customer base and loyal user base;
- a continuous stream of predictable revenues;
- more predictable sales pipeline;
- robust technological infrastructure that can handle a broad base of free users.

Question 1: Suggest a different title for this text. Why do you think that this would make a good title?

Question 2: What part of the text is hard for you to understand? What do you think it means?

Question 3: What is the main idea of this text? What details from the text support the main idea?

Question 4: Write 3-5 sentences summarizing the text.

Question 5: What is the tone of this text?

Focus on Grammar

The **passive voice** is used to show interest in the person or object that experiences an action rather than the person or object that performs the action. In other words, the most important thing or person becomes the subject of the sentence.

Passive voice

Subject	+ to be (conjugated)	+ past participle	+ rest of sentence
Simple present			
The house	is	cleaned	every day.
Present continuous			
The house	is being	cleaned	at the moment.
Simple past			
The house	was	cleaned	yesterday.
Past continuous			
The house	was being	cleaned	last week.
Present perfect			
The house	has been	cleaned	since you left.
Past perfect			
The house	had been	cleaned	before they arrived.
Future			
The house	will be	cleaned	next week.
Future continuous			
The house	will be being	cleaned	tomorrow.
Present conditional			
The house	would be	cleaned	if they had visitors.
Past conditional			
The house	would have been	cleaned	if it had been dirty.
Infinitive			
The house	must be	cleaned	before we arrive.

Task 3.1. Identify how the *passive voice* is used in the sentence(s) below

1. A digital business model might be defined as a model that leverages digital technology to improve several aspects of an organization.
2. Organizations that excel in the digital industrial economy will be those that can become more technologically capable and sophisticated.
3. For example, a critical part shipped from Canada could find itself stopped at the border as customs agents decide to further examine a line of trucks containing goods for the US.

- By 2020, more than seven billion people and businesses, and at least 30 billion devices will be connected to the Internet.

Word Roots & Stems

Rule: The suffix *-ment* forms nouns, chiefly by attaching to verbs. It can have several meanings, the most common being "an act or an instance of doing something" or "the state of being acted upon." Thus an entertainment can be "an act of entertaining" and amazement is "the state of being amazed." Sometimes *-ment* can mean "result of an action," as in advancement.

Task 3.2. Fill in the blanks below, just as in the models.

improve	improve+ment	Digital technology drives <i>improvement</i> at the traditional business process and business model levels.
advertise		
agree		
announce		
arrange		
employ		

Vocabulary Practice

Task 3.3.: Use the word bank to identify the word that best completes the sentence.

Innovation	Business model	Compete	Network
Enterprise	Proxy	Assets	Assume
Maintenance	Infrastructure	Substitute	Arrangements

- We're meeting tomorrow to discuss ... for the competition.
- The company has \$70 billion in
- We're only a small business and don't have the capital to ... with the big boys.
- He believes he has developed a successful for new software online.
- Managers usually design and oversee these roles and responsibilities in corporate organisations, multinational corporations and state-owned ..., where ownership is separated from control.
- Computers can't ... for human interaction.
- For such a process to be a success, the right ..., research design, people, partnerships, and funding need to be in place.
- Can I nominate someone as a ... to sign for me?
- A capacity for permanent ... becomes the touchstone of success.
- A domain name identifies a computer or computer ... used to access the web.
- We have a large team of IT staff who provide ongoing system and applications

12. Europe ... a leadership role in the prevention of future global crises.

Task 3.4: Write the letter of word that matches the definition.

<p>A. Interact B. Transact C. Maintenance D. Embedded E. Apparel store F. Unprecedented G. Boundaries H. Compete I. Assets J. Convergence K. Substitute L. Arrangements</p>	<p>1. clothing shop 2. to do some action that involves changing ownership or money, often as part of business; to do and complete a business activity. 3. replacement; someone or something that is used instead of another person or thing 4. something that a person or company owns that has a value. 5. to put a thing into another thing so that it becomes a part of the other; fixed into the surface of something 6. an agreement between two people or groups 7. to act together or towards others or with others 8. the fact that two or more things, ideas, etc. become similar or come 9. to take care of something and keep it in good shape; the work that is done to keep something in good condition 10. never having happened before 11. to try to be more successful than someone or something else 12. a line that divides two areas or forms an edge around an area.</p>
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Task 3.5.: For each of the words in the box, write an original sentence using the word. Circle the vocabulary word in each sentence. Be sure to write a sentence that would help the reader better understand the meaning of the word.

interact	maintenance	enterprise	substitute	convergence
enterprise	proxy	assets	assume	innovation
infrastructure	business model	compete	unprecedented	interact

Task 3.6. Translate sentences from Russian into English

- В 2020 году навыки цифрового лидерства будут приняты для всех лидеров бизнеса и наравне с другими управленческими навыками, такими как финансы.
- В 2020 году новая организация, занимающаяся технологиями цифрового бизнеса, будет координировать критически важные для бизнеса инфраструктуру цифрового бизнеса и ИТ-службы бэк-офиса.

3. Вы можете вести бизнес в электронном виде.
4. Эти отношения глубоко укоренились в нашем обществе
5. Комитет по предпринимательству и развитию поддерживает инновации в бизнесе.

UNIT 4 BIG DATA

Vocabulary

Directions: Study the following keywords and definitions.

1. **To find out (pv)** - выяснять, обнаруживать.
2. **Contribution (n)** - вклад.
3. **Existence (n)** - существование.
4. **Frequency (n)** - частота, повторяемость.
5. **Productive (adj)** - плодородный, продуктивный.
6. **Relevant (adj)** - уместный, актуальный.
7. **To compel (v)** - заставлять, вынуждать.
8. **To eradicate (v)** - истреблять, искоренять.
9. **Conventional (adj)** - традиционный.
10. **Eventually (adv)** – в конце концов.
11. **To influence on (v)** – влиять.
12. **Analysis (n)** - анализ.
13. **To reveal (v)** - раскрывать, показывать.
14. **To dispatch (v)** - отправлять, посылать.
15. **To compromise (v)** - идти на компромисс.
16. **Circumstance (n)** - обстоятельства; положение дел.
17. **Exploitation (n)** - эксплуатация, использование.
18. **To comprehend (v)** - понимать.
19. **To go through (pv)** - быть принятым, одобренным.
20. **Use to (v)** - иметь в прошлом обыкновение делать что-либо/быть в прошлом каким-либо.

Reading comprehension section

What is the importance of big data in our everyday lives?

Big data is rather new, in the world of technology. No, it is not something, which is invented yesterday, but big data has risen since the end of the last decade, and now, everywhere you go, and all the tasks you do, contribute a little or lot to big data. Since big data is an integral part of the Internet ecosystem, being a netizen, you should know, how big data can influence our lives in some way or the other.

What is big data?

Big Data term came into existence when our digital device and software start generating data in large volumes. Due to increment in the sensing and other Internet of things devices such as mobile devices, software logs, cameras, microphones, frequency identification (RFID) readers and wireless sensor networks. The data generation and the technology those stored that information gets roughly double in every 40 months as per the Wikipedia.

So the process of predictive analytics, user behaviour analytics, or certain other advanced data analysis methods that extract value from data is known as "Big Data" In other words the large volume of data – both structured and unstructured data

generated by different business and other sectors on a day-to-day basis can be described as Big data.

What is big data analytics?

Big data analytics is a process to analyze a large volume of data in order to extract the valuable information that can use to prove the facts and figures of the market trends, customer preference, helps in combat crime, reveal the business trends and other useful information that can help organizations make more-informed business decisions.

Big data for business planning, and marketing

As far as business is concerned, there are a lot of advantages or benefits of big data in businesses. Benefits of is not limited to online business, as it is extensively used as a mighty and powerful tool in offline business as well! How! Let's find out!

Big Data in Online Businesses

We all come through a number of advertisements, when we go through our news feed on Facebook, or browse any of our favourite websites. On closer observation, you will reveal, the advertisements you see, are, in some way or the other, related to your browsing habits. It means, you will get things, which you are interested in, instead of ads on conventional media, where will be forced to see dandruff removing shampoo ads, when you are looking for the next best smartphone to buy. How that is done! It is done by tracking your browsing habits and eventually showing things relevant to your search data. It might be a breach to your privacy, but come on, you are on the internet, and you can't scream for companies taking such small amount of data, and that too, for your good.

Big Data in Offline businesses

Living in a small city, you might complain about the absence of your favourite food chain like KFC, or your favourite clothing store like Pantaloons in your locality. You might need those stores, but not everybody needs that. Herein lies the importance of big data in offline businesses, as well. All the leading retail store chains do market research before they open their store in some locality. They will only open the store in your city, when most people living in your city, need those things, which are sold in that store, and that too at a reasonable price.

In the collection of market data, for market analysis, as well, big data plays an important role. Big data is used in this case to collect information about the likes and dislikes of the persons living in that city through searching behaviour on the internet or something else. From time to time, you Google might even ask suggestions from you, about your locality, and with your GPS, it can even track the places, which you are going. If it is found, most people from your city is visiting a different city to visit a particular store, Google will eventually understand, that particular store is necessary for your city. It is somewhat in this way, the big data platforms play around with our data for something productive.

Big data is also used to track the demand of a certain product in a particular market, and eventually decide the price, depending on the demand. Through Bigdata, sales can be analyzed, which can eventually be used to restock products, depending upon,

which has the highest demand. Thus, big data is one of the biggest solutions for businesses and marketing.

Big data for Government

Big data is one of the most used tools by the Government, in the western countries. Back in the time, when Obama became the president of the USA, a lot of data from the citizens were collected to make sure, everything is working perfectly before the elections. That is not the limit of the big data, used by Government.

Better services to citizens

Big data is also used as a tool to comprehend the things, the citizens are interested in to roll off the best services at the most appropriate time. Listening to the demands of the citizens is one of the biggest responsibilities of the Government, and if that is done through big data, real-time data can be collected, which can eventually be helpful for the government to improve the services, as well. Apart from the demands, Bigdata can also be used to keep a track on the daily habits of the citizens, which can also help the government to understand the problems faced by the people in the country, which can also lead to fruitful outcomes.

Better transport options

'Look before you leave'. Yes, it is something, which we come across, almost every day, and it is by Google. As Google has a lot of traffic data, it can also be collected by the government to find out the areas, which has the highest traffic, and that data can be utilized to dispatch more transport options to that area. Data can also be collected about the surge in traffic, at a particular area, during some time of the year, which can eventually be helpful to offer more transport service for that route, at that time of the year. Isn't that cool!

Big data for better health

Presently, there are a number of drug manufacturers, who are trying to find a connection between different medicines and diseases, which is a big leap for getting better health in the future. A lot of data is collected from those researches, which are eventually used to manufacture drugs, with the sole target to get a better quality of health in the future. With Big data in the world of healthcare, a number of doctors can also get united, which will also be helpful to understand the effectiveness of certain therapies and examinations, for the purpose of treating different diseases.

If the things are carried out in a proper manner, by analyzing the data properly, a number of chronic and infectious diseases like cancer, hepatitis, and other similar diseases can easily be coped with, which will eventually a big success for the healthcare industry.

Once a medication is provided to you, and you get positive results from it, you will surely give a review. Depending upon the review or rating, which you give, the effectiveness of the drug can also be analyzed, and it can also be found out, under what circumstances, you will get the best results, when you use the drug. Thus, there are a number of ways, big data can be used to get better health.

Negative aspects of big data

Yes, there are disadvantages of big data, if it is compromised to wrong hands. Big data is all about a lot of data, which we contribute to the Internet regularly, directly

or indirectly. It is because of our data, we use the pronoun big before the term data. Though all the companies try to provide maximum security to the user data and safeguard it, if it is leaked to wrong hands, a lot of facts about normal people can be compromised, which can be eventually used against those users, keeping apart exploitation of the same data for different purposes.

When a lot of data, which is associated with our habits, and everyday activities is compromised to wrong hands, it can be misused by those, who want to use social engineering in an improper way. Almost all the companies collect a lot of data about us, which we don't want to give unless we are compelled to.

They include different kinds of data, like bank account details, IDs, health details and a lot of other things. In spite of that, most such data is collected by big companies, and the negatives of big data arise, when it is used for something else, apart from doing good business, and for the advantage of mankind.

More data will be generated in the future

Who contribute to big data! Yes, it is we, who contribute to big data, and the contribution takes place through the devices, connected to the internet, which includes, our computers, laptops, smartphones, and other gadgets. IoT and IoE have not taken over completely though.

The size of Bigdata is growing every day, and in the coming future, the size will increase even faster, once numerous machines and IoT enabled devices to participate in the game of big data.

But the security of the data should always be the elementary point to take care when there is a mammoth amount of data, available to the companies. There is no doubt, a large amount of data can be utilized to present the best services, but the leakage of the data at the same time can also lead to impenetrable problems.

Thus, there are pros and cons of big data, just like other technologies, which are used regularly. Though, yes, the cons of Bigdata is a matter to ponder, as it can lead to the biggest troubles, but with improved security, the negativities of Bigdata can be eradicated to a big extent.

Question 1: Suggest a different title for this text. Why do you think that this would make a good title?

Question 2: What part of the text is hard for you to understand? What do you think it means?

Question 3: What is the main idea of this text? What details from the text support the main idea?

Question 4: Write 3-5 sentences summarizing the text.

Question 5: What is the tone of this text?

Focus on Grammar

Rule: Linking words are used to join ideas together when we're talking or writing. Sometimes we want to link two ideas that are different from each other (for example, one is a positive idea and one is a negative idea) or we want to link one idea to

another one which is surprising or unexpected. We can use linking words like **'however'**, **'although'** and **'despite'** to do this.

Although

We can use 'although' at the beginning or in the middle of a sentence. It is used in front of a clause (a clause has at least a subject and a verb that agrees with the subject).

Despite/in spite of

We use 'despite' or 'in spite of' before a noun or a gerund. It can also go in the middle or at the beginning of a sentence. 'Despite' and 'in spite of' mean exactly the same thing. You can choose whichever one you like! If you want to use 'despite' or 'in spite of' before a clause, you need to add 'the fact that'.

However

We use 'although' and 'despite/in spite of' to connect two clauses in the same sentence. On the other hand, 'however' isn't used to connect two clauses. Instead, we usually put the two ideas into two separate sentences. We put 'however' in the second sentence, and we can put it at the beginning, at the end, or after the subject.

Task 4.1.: Identify how the contrasts which are used in the sentence(s) below

1. In spite of that, most such data is collected by big companies, and the negatives of big data arise, when it is used for something else, apart from doing good business, and for the advantage of mankind.
2. Though all the companies try to provide maximum security to the user data and safeguard it, if it is leaked to wrong hands, a lot of facts about normal people can be compromised, which can be eventually used against those users, keeping apart exploitation of the same data for different purposes.
3. Though, yes, the cons of Bigdata is a matter to ponder, as it can lead to the biggest troubles, but with improved security, the negativities of Bigdata can be eradicated to a big extent.
4. You might need those stores, but not everybody needs that.
5. It might be a breach to your privacy, but come on, you are on the internet, and you can't scream for companies taking such small amount of data, and that too, for your good.

Word Roots & Stems

Rule: The prefix - **un** adds "not" to the meaning of the word. It is an *uncomplicated* prefix.

Task 4.2.: Fill in the blanks below, just as in the models.

uncertain		
unclear	un + clear	The goal of your plan is unclear.
unavailable		
unfriendly		

unlock		
unknown	un + known	The origin of the universe is still unknown.

Vocabulary Practice

Task 4.3.: Use the word bank to identify the word that best completes the sentence.

contribution	eventually	eradicate	circumstances
productive	existence	used to	conventional
analysis	exploitation	comprehend	dispatch

1. It was a long trip but ... we arrived.
2. The doctor's ... of his blood took a week.
3. The ... of her childhood were difficult.
4. When she started school she hated the schedule, but now she is ... it.
5. The letter was ... this morning.
6. The wealthy man made a _... to the charity.
7. He is a ... worker and always gets a lot done.
8. He ... everything she says, but acts like he does not understand.
9. Many people believe in the ... of UFO's, but I don't.
10. The ... of natural resources has damaged the environment.
11. Salk's vaccine made it possible to ... smallpox.
12. There was nothing special about the design- it was a ... office building.

Vocabulary Practice

Task 4.4.: Write the letter of the word that matches the definition.

<ul style="list-style-type: none"> A. Comprehend B. Exploitation C. Contribution D. Eradicate E. Circumstance F. To go through G. Eventually H. Compel I. Productive J. Reveal K. Use to L. Conventional 	<ol style="list-style-type: none"> 1. something is given or offered; something that you do to help produce or develop something, or to help make something successful 2. able to make or create a large number of goods, food, work, etc. 3. to force to do something. 4. to destroy or completely get rid of something such as a social problem or a disease 5. finally, in the end, especially after a long time. 6. to allow something to be seen that was previously hidden. 7. condition or situation; a fact or event that makes a situation the way it is. 8. using something for ones' benefit. 9. to understand fully.
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	<p>10. to look at or examine sth carefully, especially in order to find sth. If a law, plan, or deal goes through, it is officially accepted or approved</p> <p>11. If something used to happen or a situation used to exist, it happened regularly or existed in the past but it does not happen or exist now</p> <p>12. conventional objects or ways of doing things are the usual ones that have been used for a long time.</p>
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Vocabulary Practice

Task 4.5.: For each of the words in the box, write an original sentence using the word. Circle the vocabulary word in each sentence. Be sure to write a sentence that would help the reader better understand the meaning of the word.

influence	analysis	find out	existence
compelled	eradicated	conventional	eventually
Reveal	compromised	exploitation	comprehend

Task 4.6. Translate sentences from Russian into English

1. Компания обвиняется в эксплуатации детей, что является очень серьезным обвинением.
2. Мы живем во все более технологическом обществе, в котором компьютеры и робототехника оказывают огромное влияние на нашу повседневную жизнь.
3. В процессе интерпретации и интеграции результатов сравнительного анализа в документе мы приложили все усилия, чтобы искоренить обнаруженные нами ошибки.
4. В некоторых случаях патентообладатель может быть вынужден предоставить лицензию на использование своего патента на разумных условиях.
5. Новые обстоятельства вынудили изменить требования к использованию нового компьютерного оборудования.

UNIT 5 BUSINESS INTELLIGENCE

Vocabulary

Directions: Study the following keywords and definitions

1. **Actionable (adj)** - требующий принятия мер; требующий действия; реализуемый.
2. **Corporate (adj)** - относящийся к корпорациям; акционерный; корпорационный;.
3. **Operational efficiency** - эффективность работы.
4. **To enhance (v)** - увеличить; усилить; углубить; улучшать.
5. **Heterogeneous (adj)** - гетерогенный; различный; неоднородный; разнородный.
6. **Intelligence (n)** - умственные способности, разум.
7. **To perform (v)** - выполнять, делать.
8. **Generate (v)** - производить, вырабатывать.
9. **To extract (v)** - извлекать, вытаскивать.
10. **To convert (v)** - переводить, переоборудовать, изменять.
11. **Analysis (n)** - анализ.
12. **Revenue (n)** - доходы.
13. **Due to (adj)** - из-за чего-либо.
14. **Affordable (adj)** - доступный.
15. **Collaboration (n)** - сотрудничество.
16. **To execute (v)** - исполнять, осуществлять.
17. **To take out (pv)** - take someone on a date
18. **To deal with (pv)** - иметь дело с кем-либо/чем-либо, рассматривать вопрос, заниматься проблемой.
19. **Budget (n)** - бюджет.
20. **Come up with (pv)** - придумывать, разрабатывать.

Reading comprehension section

What is Business Intelligence?

BI(Business Intelligence) is a set of processes, architectures, and technologies that convert raw data into meaningful information that drives profitable business actions. It is a suite of software and services to transform data into actionable intelligence and knowledge.

BI has a direct impact on organization's strategic, tactical and operational business decisions. BI supports fact-based decision making using historical data rather than assumptions and gut feeling.

BI tools perform data analysis and create reports, summaries, dashboards, maps, graphs, and charts to provide users with detailed intelligence about the nature of the business.

How Business Intelligence systems are implemented?

Here are the steps:

Step 1) Raw Data from corporate databases is extracted. The data could be spread across multiple systems heterogeneous systems.

Step 2) The data is cleaned and transformed into the data warehouse. The table can be linked, and data cubes are formed.

Step 3) Using BI system the user can ask queries, request ad-hoc reports or conduct any other analysis.

Examples of Business Intelligence System used in Practice

Example 1:

In an Online Transaction Processing (OLTP) system information that could be fed into product database could be

- add a product line
- change a product price

Correspondingly, in a Business Intelligence system query that would be executed for the product subject area could be did the addition of new product line or change in product price increase revenues

In an advertising database of OLTP system query that could be executed

- Changed in advertisement options
- Increase radio budget

Correspondingly, in BI system query that could be executed would be how many new clients added due to change in radio budget

In OLTP system dealing with customer demographic data bases data that could be fed would be

- increase customer credit limit
- change in customer salary level

Correspondingly in the OLAP system query that could be executed would be can customer profile changes support higher product price

Example 2:

A bank gives branch managers access to BI applications. It helps branch manager to determine who the most profitable customers are and which customers they should work on.

The use of BI tools frees information technology staff from the task of generating analytical reports for the departments. It also gives department personnel access to a richer data source.

Four types of BI users

Following given are the four key players who are used Business Intelligence System:

1. The Professional Data Analyst:

The data analyst is a statistician who always needs to drill deep down into data. BI system helps them to get fresh insights to develop unique business strategies.

2. The IT users:

The IT user also plays a dominant role in maintaining the BI infrastructure.

3. The head of the company:

CEO or CXO can increase the profit of their business by improving operational efficiency in their business.

4. The Business Users"

Business intelligence users can be found from across the organization. There are mainly two types of business users

1. Casual business intelligence user
2. The power user.

The difference between both of them is that a power user has the capability of working with complex data sets, while the casual user need will make him use dashboards to evaluate predefined sets of data.

Advantages of Business Intelligence

Here are some of the advantages of using Business Intelligence System:

1. Boost productivity

With a BI program, It is possible for businesses to create reports with a single click thus saves lots of time and resources. It also allows employees to be more productive on their tasks.

2. To improve visibility

BI also helps to improve the visibility of these processes and make it possible to identify any areas which need attention.

3. Fix Accountability

BI system assigns accountability in the organization, as there must be someone who should own accountability and ownership for the organization's performance against its set goals.

4. It gives a bird's eye view:

BI system also helps organizations as decision makers get an overall bird's eye view through typical BI features like dashboards and scorecards.

5. It streamlines business processes:

BI takes out all complexity associated with business processes. It also automates analytics by offering predictive analysis, computer modeling, benchmarking and other methodologies.

6. It allows for easy analytics.

BI software has democratized its usage, allowing even nontechnical or non-analysts users to collect and process data quickly. This also allows putting the power of analytics from the hand's many people.

BI System Disadvantages

1. Cost:

Business intelligence can prove costly for small as well as for medium-sized enterprises. The use of such type of system may be expensive for routine business transactions.

2. Complexity:

Another drawback of BI is its complexity in implementation of data warehouse. It can be so complex that it can make business techniques rigid to deal with.

3. Limited use

Like all improved technologies, BI was first established keeping in consideration the buying competence of rich firms. Therefore, BI system is yet not affordable for many small and medium size companies.

4. Time Consuming Implementation

It takes almost one and half year for data warehousing system to be completely implemented. Therefore, it is a time-consuming process.

Trends in Business Intelligence

The following are some business intelligence and analytics trends that you should be aware of.

Artificial Intelligence: Gartner' report indicates that AI and machine learning now take on complex tasks done by human intelligence. This capability is being leveraged to come up with real-time data analysis and dashboard reporting.

Collaborative BI: BI software combined with collaboration tools, including social media, and other latest technologies enhance the working and sharing by teams for collaborative decision making.

Embedded BI: Embedded BI allows the integration of BI software or some of its features into another business application for enhancing and extending it's reporting functionality.

Cloud Analytics: BI applications will be soon offered in the cloud, and more businesses will be shifting to this technology. As per their predictions within a couple of years, the spending on cloud-based analytics will grow 4.5 times faster.

Summary:

- BI is a set of processes, architectures, and technologies that convert raw data into meaningful information that drives profitable business actions.
- BI systems help businesses to identify market trends and spot business problems that need to be addressed.
- BI technology can be used by Data analyst, IT people, business users and head of the company.
- BI system helps organization to improve visibility, productivity and fix accountability

The draw-backs of BI is that it is time-consuming costly and very complex process.

Question 1: Suggest a different title for this text. Why do you think that this would make a good title?

Question 2: What connections can you make between the text and other texts, information, or experiences?

Question 3: If you were asked to edit this text down to half its length, what details would you remove?

Question 4: What is the main idea of this text? What details from the text support the main idea?

Question 5: Write 3-5 sentences summarizing the text.

Focus on Grammar

When we know something is true now we use a simple present tense of a verb. When we are not sure, we use a **modal** before the verb to show how likely we think it is. For example, if we see rain falling, we say "It is raining" because we know it is; we are 100% sure.

If we are indoors and cannot see the weather but do see a wet person holding an umbrella, we say "It must be raining" because that is very likely true; we are 95% sure.

In cases where we are less certain, for example, if the newspaper said there was a chance of rain today but we cannot see outside, we say "It may be raining.", "It might be raining." or "It could be raining." (these three are all the same).

Task 1.1: Identify how the modals-likelihood-present is used in the sentence(s) below:

1. In an advertising database of OLTP system query that could be executed.
2. In OLTP system dealing with customer demographic data bases data that could be fed
3. The use of such type of system may be expensive for routine business transactions.
4. The data could be spread across multiple systems heterogeneous systems.
5. Using BI system the user can ask quires, request ad-hoc reports or conduct any other analysis.

Word Roots & Stems

Rule: The suffix - **ous** changes a noun into an adjective. Suffiex “**ous**”, “**ious**” and “**eous**” represent an adjective. The meaning is “having the quality of” like *dangerous*.

Task 1.2.: Fill in the blanks below, just as in the models. Give your examples

gaseous	gas + eous	Above 100 degrees C., water becomes gaseous.
furious	(fury-y) + ious	When you pull her tail, the cat gets furious.
mysterious		
spacious		
nervous	(nerves - es) + ous	I was nervous when he drove fast.
glorious		

Vocabulary Practice

Task 1.3.: Use the word bank to identify the word that best completes the sentence.

actionable	corporate	heterogeneous	intelligence	come up with
perform	generated	analysis	revenue	dealing with
efficiency	enhance	due to	affordable	collaboration
extracted	convert	executed	takes out	budget

1. That restaurant is too expensive but this is
2. The article ... a lot of letters to the editor.
3. It is difficult to ... a lot of crying children.
4. The doctor's ... of his blood took a week.
5. The game was stopped ... rain.
6. Spices ... the taste of food.
7. The ... garden had many types and colors of flowers.
8. The ... between the two artists was wonderful.
9. Better ... is the goal of machines and businesses.
10. He was ... for refusing to pay the criminal gangs.
11. The family ... does not include money for a vacation this year.
12. This isn't my car, it's a ... car.
13. Most of the government's ... is from taxes.
14. I want to ... Sally. Do you think she would say yes?
15. Public slander is more than rude, it is
16. The dentist had to ... a tooth.
17. The old school was ...ed into an office building.
18. The band will ... at 8.
19. Einstein's ... was the greatest of his generation.

Task 1.4.: Write the letter of a word that matches the definition.

<ul style="list-style-type: none"> A. actionable B. corporate C. efficiency D. enhance E. heterogeneous F. intelligence G. perform H. generated I. extracted J. convert K. analysis L. revenue M. due to N. affordable O. collaboration P. executed Q. takes out R. dealing with S. budget T. come up with 	<ol style="list-style-type: none"> 1. describes something that one has enough money for. 2. to create or to produce. 3. cope with, manage, handle 4. research and investigation. 5. because of. 6. to improve, increase, or intensify. 7. made up of different kinds or types. 8. the act of working together. 9. doing work with the least waste of time, money and effort. 10. to do something, such as follow a plan or order. 11. plan for spending money. 12. belonging to a corporation. 13. to think of an answer to a problem or question. 14. money that comes into a government or company. 15. take someone on a date 16. related to anything that provokes legal action.
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	17.to remove or take out. 18.change. 19.to do something 20.ability to know.
--	--

Task 1.5.: For each of the words in the box, write an original sentence using the word. Circle the vocabulary word in each sentence. Be sure to write a sentence that would help the reader better understand the meaning of the word.

actionable	corporate	heterogeneous	intelligence	come up with
perform	generated	analysis	revenue	dealing with
efficiency	enhance	due to	affordable	collaboration
extracted	convert	executed	takes out	budget

Task 1.6. Translate sentences from Russian into English

1. В дальнейшем многие задачи будут выполнять роботы.
2. Созданное программное обеспечение было результатом сотрудничества между несколькими предприятиями.
3. Нам нужно придумать лучший способ заработать деньги.
4. Анализ эффективности проекта с точки зрения процессов имеет тесную связь с анализом финансово-экономической эффективности.
5. В отчете указывается, что искусственный интеллект и машинное обучение теперь могут выполнять сложные задачи, выполняемые человеческим интеллектом.

UNIT 1. WHAT IS INFORMATION TECHNOLOGY?

1. **Bedrock** (n) -a strong base for something, especially the facts or the principles on which it is based.
2. **Hardware** (n) - the machinery and electronic parts of a computer system.
3. **Software** (n) - the programs, etc. used to operate a computer.
4. **Brainware** (n) - sorts paper and electronic documents and seamlessly pass content to your core business applications.
5. **To retrieve** (v) - to find and get back data or information that has been stored in the memory of a computer.
6. **To transmit** (v) - *transmit (something) (from...) (to...)* to send an electronic signal, radio or television broadcast, etc.
7. **To manipulate data** (v) - to control or use something in a skilful way.
8. **To overtake** (v) - *overtake somebody/something* to become greater in number, amount or importance than something else.
9. **To be responsible for** (v) - *responsible (for something)* being the cause of something.
10. **Business objective** – business goals.
11. **Implementation** (n) - the act of making something that has been officially decided to start happen or be used.
12. **Long-term goals** – goals that will last or have an effect over a long period of time.
13. **To be broken down into** (v) – to separate idea or statement or a group of people into smaller parts in order to make it easier to understand or deal with.
14. **Front-end development** - Back end development refers to the server-side of an application and everything that communicates between the database and the browser.
15. **Back-end development** - components and features that are indirectly accessed by a user through a front-end application or system.
16. **IT apprenticeships** - the system of learning a new skill in the IT-sphere.
17. **IT internships** - a period of time during which a student or new graduate gets practical experience in a job, for example during the summer holiday/vacation.
18. **To involve** -(v) - to make someone or something a part of something else.
19. **Stepping-stone** -(n) - something that allows you to make progress or begin to achieve something.
20. **Consumer** -(n) - An organisms that get its energy from other organisms because it cannot make its own energy from non-living things in the environment.

UNIT 2 IMPORTANCE OF INFORMATION TECHNOLOGY IN BUSINESS AND ITS NEW ROLE

1. **Typewriter (n)** - a machine with keys that you press to produce letters and numbers on a paper.
2. **Carbon sheets (n)** - a copy of a written document that is made using carbon paper (= thin paper covered in carbon).
3. **Burgeoning technology (n)** - a source of past, present and future tech news and updates from around the globe.
4. **Dizzying pace (phr)** - very fast or confusing development
5. **Acquisition (n)** - the process of getting something, something that is bought by a company, such as another company, a building, or a piece of land.
6. **To comprise (v)** - to be the parts or members of something; to make up something.
7. **To encompass (v)** - to include several different things.
8. **Retrieve (n)** - to find and bring back something
9. **Spreadsheet (n)** - a piece of computer software used for showing rows and columns of numbers or other data, and for doing calculations with this data.
10. **Databases (n)** - an organized set of data that is stored in a computer and can be looked at and used in various ways.
11. **Overstate (v)** - to talk about something in a way that makes it seem more important than it really is – преувеличивать.
12. **Under the umbrella (prep)** – If something happens under particular circumstances or conditions, it happens when those circumstances or conditions exist.
13. **Executable programs (n)** - an executable file is one that contains a program
14. **Ubiquitous (adj)** - found or existing everywhere; seeming to be everywhere.
15. **To keep tabs on** - to watch someone or something carefully to check they do nothing wrong.
16. **To keep a watchful eye on** - watch carefully to make sure there are no problems.
17. **To trim costs (v)** - the reduction of plant and equipment with a minimum reduction in production.
18. **To utilize resources (v)** - to use something in an effective way.
19. **Real-time inventory** – the system of good planning of production and an accurate estimate of consumer demand.
20. **E-commerce (n)** - the business of buying and selling goods and services on the

UNIT 3 DIGITAL BUSINESS AND ITS MODAL TYPES

1. **Interact (v)** - to act together or towards others or with others
2. **Maintenance (n)** - to take care of something and keep it in good shape; the work that is done to keep something in good condition
3. **Network (n)** - a group of connected parts that work together; a system or group of connected parts.
4. **Proxy (n)** - a person who is given authority to act for another.

5. **To transact (v)** - to do some action that involves changing ownership or money, often as part of business; to do and complete a business activity.
6. **Sophisticated (adj)** - a sophisticated machine or system is very advanced and works in a clever way
7. **Unprecedented (adj)** - never having happened before
8. **Embedded (v)** - to put a thing into another thing so that it becomes a part of the other; fixed into the surface of something.
9. **To assume (v)** - to think that something is likely to be true, although you have no proof.
10. **Innovation (n)** - New and creative method or technology.
11. **Infrastructure (n)** - the basic systems, such as transport and communication, that a country or organization uses in order to work effectively
12. **Apparel store (n)** – clothing shop.
13. **Substitute (n)** - replacement; someone or something that is used instead of another person or thing.
14. **Enterprise (n)** - a business organization
15. **Business model (n)** - a description of the different parts of a business or organization showing how they will work together successfully to make money.
16. **To compete (v)** - to try to be more successful than someone or something else
17. **Assets (n)** - something that a person or company owns that has a value.
18. **Arrangement (n)** - an agreement between two people or groups.
19. **Boundaries (n)** - a line that divides two areas or forms an edge around an area
20. **Convergence (n)** - the fact that two or more things, ideas, etc. become similar or come together.

UNIT 4 BIG DATA

1. **To find out (pv)** - to get information about something, or to learn a fact for the first time.
2. **Contribution (n)** - something is given or offered; something that you do to help produce or develop something, or to help make something successful.
3. **Existence (n)** - the state of living or being; the state of existing.
4. **Frequency (n)** - the number of times something happens in a particular period, or the fact that something happens often or a large number of times.
5. **Productive (adj)** - able to make or create a large number of goods, food, work, etc.
6. **Relevant (adj)** - related or useful to what is happening or being talked about.
7. **To compel (v)** - to force to do something.
8. **To eradicate (v)** - to destroy or completely get rid of something such as a social problem or a disease.
9. **Conventional (adj)** - conventional objects or ways of doing things are the usual ones that have been used for a long time.
10. **Eventually (adv)** – finally, in the end, especially after a long time.

11. To influence on (v) – to make a change in; to affect how someone thinks or behaves, or how something develops.

12. Analysis (n) - research and investigation; the process of analysing something.

13. To reveal (v) - to allow something to be seen that was previously hidden.

14. To dispatch (v) - to send someone or something somewhere.

15. To compromise (v) - to agree to something that is not exactly what you want.

16. Circumstance (n) - condition or situation; a fact or event that makes a situation the way it is.

17. Exploitation (n) - using something for ones' benefit.

18. To comprehend (v) - to understand fully.

19. To go through (pv) - to look at or examine sth carefully, especially in order to find sth. If a law, plan, or deal goes through, it is officially accepted or approved.

20. Use to (v) - if something used to happen or a situation used to exist, it happened regularly or existed in the past but it does not happen or exist now.

UNIT 5 BUSINESS INTELLIGENCE

1. Actionable (adj) - related to anything that provokes legal action; able to be used as a reason for doing something.

2. Corporate (adj) - belonging to a corporation.

3. Operational efficiency (n) - doing work with the least waste of time, money and effort.

4. To enhance (v) - to improve, increase, or intensify.

5. Heterogeneous (adj) - made up of different kinds or types.

6. Intelligence (n) - the ability to learn, understand, and think about things.

7. To perform (v) - to do something

8. Generate (v) - to create or to produce.

9. To extract (v) - to remove or take out.

10. To convert (v) - change.

11. Analysis (n) - research and investigation.

12. Revenue (n) - money that comes into a government or company.

13. Due to (adj) - because of.

14. Affordable (adj) - describes something that one has enough money for.

15. Collaboration (n) - the act of working together.

16. To execute (v) - to do something, such as follow a plan or order.

17. To take out (pv) - take someone on a date

18. To deal with (pv) - cope with, manage, handle

19. Budget (n) - plan for spending money.

20. Come up with (pv) - to think of an answer to a problem or question.

**APPENDIX 2
KEYS**

<p>Unit 1 Task 1.3.: Answer Key: 1) retrieve 2) transmit 3) involve 4) bedrock 5) hardware 6) brainware 7) manipulate data 8) will be responsible for 9) business objectives 10) long term goals 11) stepping stone 12) implementation</p>	<p>Unit 2 Task 2.3. Fill-in-the-blank Answer Key: 1) database; 2) Spreadsheet; 3) Encompasses; 4) Comprises; 5) Retrieve; 6) e-commerce; 7) Acquisition; 8) keep a watchful eye on; 9) Burgeoning; 10) Typewriter; 11) be overstated; 12) Ubiquitous.</p>	<p>Unit 3 Task 3.3. Fill-in-the-blank Answer Key: 1) arrangements; 2) assets 3) compete; 4) business model; 5) enterprises; 6) substitute; 7) infrastructure; 8) proxy; 9) innovation; 10) network; 11) maintenance; 12) has assumed</p>
<p>Task 1.4. Matching Answer Key: A - 5 B - 8 C - 9 D - 7 E - 12 F - 3 G - 4 H - 2 I - 10 J - 6 K - 11 L - 1</p>	<p>Task 2.4. Matching Answer Key: A - 6 B - 2 C - 11 D - 7 E - 4 F - 5 G - 3 H - 1 I - 10 J - 9 K - 12 L - 8</p>	<p>Task 3.4 Matching Answer Key: A - 7 B - 2 C - 9 D - 5 E - 1 F - 10 G - 12 H - 11 I - 4 J - 8 K - 3 L - 6</p>

<p>Unit 4</p> <p>Task 4.3. Fill-in-the-blank Answer Key:</p> <ol style="list-style-type: none"> 1) eventually 2) analysis 3) circumstances 4) used to 5) dispatch 6) contribution 7) productive 8) comprehend 9) existence 10) exploitation 11) eradicate 12) conventional 	<p>Unit 5</p> <p>Task 5.3. Fill-in-the-blank Answer Key:</p> <ol style="list-style-type: none"> 1) affordable 2) generated 3) deal with 4) analysis 5) due to 6) enhance 7) heterogeneous 8) collaboration 9) efficiency 10) executed 11) budget 12) corporate 14) revenue 15) take out 16) actionable 17) extract 18) convert 19) perform 20) intelligence 	
<p>Task 4.4.: Matching Answer Key:</p> <p>A – 9</p> <p>B – 8</p> <p>C – 1</p> <p>D – 4</p> <p>E – 7</p> <p>F – 10</p> <p>G – 5</p> <p>H – 3</p> <p>I – 2</p> <p>J – 6</p> <p>K – 11</p> <p>L - 12</p>	<p>Task 5.5. Matching Answer Key:</p> <p>A. 16</p> <p>B. 12</p> <p>C. 9</p> <p>D. 6</p> <p>E. 7</p> <p>F. 20</p> <p>G. 19</p> <p>H. 2</p> <p>I. 17</p> <p>J. 18</p> <p>K. 4</p> <p>L. 14</p> <p>M. 5</p> <p>N. 1</p> <p>O. 8</p> <p>P. 10</p> <p>Q. 15</p> <p>R. 3</p> <p>S. 11</p> <p>T. 13</p>	