КАЗАНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

Кафедра английского языка

COMPUTERS & INTERNET IN DAILY USE

Учебное пособие для студентов факультета ВМК

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От составителей

Данное учебное пособие предназначено для студентов Института вычислительной математики и информационных технологий (ВМиИТ-ВМК), имеющих уровень А1/А2, и представляет собой сборник аутентичных текстов из современных электронных источников.

Пособие состоит из 2 частей и нескольких приложений: инструкций по реферированию текста, фраз-клише для этих целей, текстов для реферирования, глоссария терминов, встречающихся в текстах и списка ссылок на Интернет-ресурсы. Тематика текстов охватывает вопросы, актуальные для будущих специалистов в данной области, а именно: многочисленные аспекты использования компьютеров и Интернета в различных сферах повседневной жизни, что, с одной стороны, способствует повышению профессиональной компетенции, с другой, развивает их познавательную деятельность и языковые навыки.

Каждый текст сопровождается упражнениями, которые рассчитаны на расширение, закрепление и активизацию как специальной, так и общеупотребительной лексики, а также реферирование текстов по специальности. Материалы пособия прошли апробацию в студенческих группах и могут быть использованы в качестве дополнение к общеязыковым учебникам для самостоятельной работы, а также использоваться во время контрольных точек и на зачетах.

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Part I. Computers in Daily Use

Unit 1
Computers in our life: advantages and disadvantages

I. Before you read the text, answer the following questions:

When did the first personal computer appear?

How was it different from the computers that preceded it?

What are positive and negative effects of computers in daily use?

Of all advantages that computer has brought to the modern world, which is the most beneficial?

II. Read and say whether these sentences are true or false:

1. First computers were the same as today.

2. First computers were tiny.

3. Computers have never been used in science

4. Computers save trees.

5. We can't transfer our voice into text.

6. Computers are slow and inexact.

7. Computers aren't as useful as typewriters.

8. Using a computer is very healthy.

9. Computers never stop working.

10. Computers can have a bad influence on children.

III. Read the text to check your answers.

Nowadays, we cannot imagine our life without computers and the fact is that they have become so important that nothing can replace them. They seem to be everywhere today. Since 1948 when the first real computer was invented our life has changed so much that we can call it real digital revolution. First computers were so huge that they occupied whole rooms or buildings being relatively slow. They were not faster than modern simple watches or calculators. Nowadays they are also used by scientists and they may also be as huge as the old ones but they are millions times faster. They can simultaneously perform many complex operations and scientists practically can't do without them. Thanks to them people have access to enormous amount of information. Gathering data has never been simpler than now. They are not only used in laboratories but also in factories to control production. Sometimes it is computers who manufacture other computers. Of course except these superb features there is also dark side of computer technology because every invention brings us not only benefits but also threats.

Imagine how much paper would have to be used, how many trees would have to be cut just to store information which is today on hard disks. Data stored on just one CD in paper form would use room of dozens square meters and would weigh thousands of kilos. Nowadays techniques of converting data from paper to digital form have also tremendously developed. You can simply rewrite the text using a keyboard. If you are not good at it you can use a scanner to scan necessary documents. At least there are special devices which can transfer our voice into text. Thanks to computers banks, private and government companies, libraries, and many other institutions can save millions of square meters and billions of dollars. Nowadays we have access to billions of information and due to the computer's capabilities we actually don't need to worry not only how to store them but also how to process them.

Sometimes there is false information in newspapers that due to the computer's mistake something has failed. But it's not true because machines cannot make mistakes of their own. Sometimes it's a short circuit, other time it's a hardware problem but most often it is a human mistake, someone who designed and wrote the flawed computer program.

They are very useful in office work, we can write texts such as reports and analysis. Compared with old typewriters while using computers we don't have to worry about making mistakes in typewriting because special programs help us to avoid them and we can change them any time. When the text is finished we can print it in as many copies as we want. At least but not at last, we can communicate with whole world very fast and cheap using the Internet.

We can watch videos and listen to music having only PC. We don't need video player, TV and stacking hi-fi any more. Furthermore, we don't have to buy PCs which take much room due to their other necessary components and wires. We can always buy a laptop or a palm top which is even smaller, and use them outside anywhere we want.

The monitors used to be dangerous for our eyesight. Nowadays due to technological development they are very safe. But there are other threats to our health than damaging our sight. Working with computers and permanent looking on the monitor can cause epilepsy, especially with children. Very often parents want to have a rest and don't draw enough attention to how long their children use computer. This negative effects also concerns TV screen.

The biggest problem is when our hard disk brakes down because of the data stored on it. Other hardware is easily replaceable. But there are many ways of avoiding consequences of loosing our data, for example by saving it on CDs. Except hardware failures there are also software ones. For example, for many years Windows Operating System was very unstable and that's why many other OS were written. Now the most common are Linux, Windows XP, MacOs (for Macintosh computers). Except of unstable OS another and maybe the main threat to our data are computer viruses. There are billions of them and every day new ones come into being. If you have the Internet connection you have to be particularly careful and download anti-virus programs. Fortunately, there are also many of them and most of them are freeware. You have to remember to download updates.

The level of violence is very high so it should be properly marked and parents are obliged to draw their attention to this issue. There are many extremely bloody games such as "grand theft auto", "quake" etc. For example, in GTA you are a member of mafia and to promote in crime hierarchy you should kidnap people, steal cars, robe banks etc. As a bonus you can also run over pedestrians. There are also many games in which you are a soldier and your mission is to kill as many enemies as possible. The availability of sexual content is enormous and you can do practically nothing to protect your child, especially when it's interested in this matter.

If you spend most of your free time using a computer you should go to see a psychologist, otherwise you might become a computer addict. However, I think that the situation is very serious. Computers are practically irreplaceable and we can't make without them any more. They are everywhere, at our homes, schools, at work, in our cars. It is very possible that the next stage of human evolution is some kind of superb half human and half machines. On the other hand it isn't the closest future. But the truth is that computer will rule the world sooner or later.

(http://www.ehow.com/facts_4744867_advantages-disadvantages-computer-technology.html)

IV. Answer the questions. Try not to refer to the text.

1. When was the first computer invented?

2. How were first computers different from modern ones?

3. Where can data be stored?

4. Are computers helpful in office work?

5. What are the drawbacks of computers?

V. Here are nine simple sentences which summarize the main idea of each paragraph of the text. Put them in the right order.

1. The other threat is that you can be a computer addict.

2. First computers differed from today's ones.

3. The main threats to younger users of computers are cruelty and bloody games.

4. Computers save storage place.

5. Computers sometimes break down.

6. Computers can calculate and process information faster and more accurately than humans.

7. Computers are user-friendly.

8. Computers improve our lives.

9. Computers are dangerous to our health.

VI. Study thoroughly Appendices 1 and 2. Write a summary of the text according to them. Use the sentences from exercise V.

Optional exercises.

V. Find the synonyms to the words given from the text:

1) at the same time, 2) enormous, 3) to save, 4) thanks to, 5)to work up, 6) simple, 7) hooked, 8) to be forced, 9) to transform, 10) defective.

VI. Complete the table with the derivatives:

	noun	adjective	verb
1.	Access		
2.		Beneficial	
3.			Compute
4.	improvement		
5.		informative	
6.			invent
7.	monitor		
8.		occupied	
9.			store
10	threat		

VII. Fill in the gaps with the words from the text:

1. Thanks to computers people can have ….. to enormous amount of information.

2. Nowadays techniques of ……. Data from paper to digital form have tremendously developed.

3. Computers calculate and process ….. faster and more accurately than humans.

4. There are billions of ….. and every day new ones come into being.

5. The level of ….. should be properly marked and parents must draw their attention to this problem.

VIII. Make questions to these answers.

1. Computers can perform a lot of complex operations.

2. They are used both in laboratories and factories.

3. Data stored on just one CD in paper form would weigh thousands of kilos.

4. Computers improve our lives.

 5. We can always buy a laptop or a palm top.

6. Computers are dangerous to our health.

IX. Put the words in the correct order to make the sentences.

1. be, to, computers, today, everywhere, seem.

2. simultaneously, complex, they, many, can, operations, perform.

3. not good, documents, to scan, a scanner, if, necessary, you, use, are, at , typing, can, you.

4. want, the text, we, as, as, many, when, print, is finished, can, copies, in, it.

5. to buy, we, room, much, have to, don't, take, which, PCs.

XI. Choose one of the topics and make a presentation or a report. Use the information from the References' websites to help you (Appendix 4).

1. How has the world benefited from the invention of the PC? What problems have accompanied the computer revolution?

2. The most beneficial of all the advantages that the computer has brought to the modern world.

3. Describe the invention that has had the greatest effect on the 20th century.

Unit 2
Role of computers in education

I. Before you read the text answer the following questions:

Where can you find a use for a computer? How are they used?

What is the role of computers in education?

What are the benefits of introducing computers early in education?

II. Read the text quickly and check your answers.

III. Read the text again and match the paragraphs with the titles:

1. Computer hard drives and storage devices are an excellent way to store data.

2. Computers in education

3. Computer software helps better presentation of information.

4. Computers are a brilliant aid in teaching.

5. Computers enable access to the Internet.

6. Computers have given impetus to distance education.

7. Computers are everywhere.

     A.   Computers have changed the way we work, be it any profession. Therefore, it is only natural that the role of computers in education has been given a lot of importance in recent years. Computers play a vital role in every field. They aid industrial processes, they find application in medicine; they are the reason why software industries developed and flourished and they play an important role in education. This is also why the education system has made computer education a part of school curriculum. Considering the use of computer technology is almost every sphere of life, it is important for everyone to have at least the basic knowledge of using computers. Let's look at what role computer technology plays in the education sector.

     B. Computer technology has had a deep impact on the education sector. Thanks to computers, imparting education has become easier and much more interesting than before. Owing to memory capacities of computers, large chunks of

data can be stored in them. They enable quick processing of data with very less or no chances of errors in processing. Networked computers aid quick communication and enable web access. Storing documents on computers in the form of soft copies instead of hard ones helps save paper. The advantages of computers in education primarily include: storage of information, quick data processing, audio- visual aids in teaching, better presentation of information, and access to the Internet, quick communication between students, teachers and parents. Computer teaching plays a key role in the modern education system. Students find it easier to refer to the Internet than searching for information in fat books. The process of learning has gone beyond learning from prescribed textbooks. Internet is a much larger and easier- to- access storehouse of information. When it comes to storing retrieved information, it is easier done on computers than maintaining hand- written notes.

C. Online education has revolutionized the education industry. Computer technology has made the dream of distance learning, a reality. Education is no longer limited to classrooms. It has reached far and wide, thanks to computers. Physically distant locations have come closer due to Internet accessibility. So, even if students and teachers are not in the same premises, they can very well communicate with one another. There are many online educational courses, whereby students are not required to attend classes or be physically present for lectures. They can learn from the comfort of their homes and adjust timings as per their convenience.

D. Computers facilitate effective presentation of information. Presentation software like PowerPoint and animation software like Flash among others can be of great help to teachers while delivering lectures. Computers facilitate audio-visual representation of information, thus making the process of learning interactive and interesting. Computer-aided teaching adds a fun element to education. Teachers hardly use chalk and board today. They bring presentations on a flash drive, plug it in to a computer in the classroom, and the teaching begins. There's color, there's sound, there's movement - the same old information comes forth in a different way and learning becomes fun. The otherwise not-so-interesting lessons become interesting due to audio-visual effects. Due to the visual aid, difficult subjects can be explained in better ways. Things become easier to follow, thanks to the use of computers in education.

E. Internet can play an important role in education. As it is an enormous information base, it can be harnessed for retrieval of information on a variety of subjects. The Internet can be used to refer to information on different subjects. Both teachers and students benefit from the Internet. Teachers can refer to it for additional information and references on the topics to be taught. Students can refer to web sources for additional information on subjects of their interest. The Internet helps teachers set test papers, frame questions for home assignments and decide

project topics. And not just academics, teachers can use web sources for ideas on sports competitions, extracurricular activities, picnics, parties and so on.

F. Computers enable storage of data in the electronic format, thereby saving paper. Memory capacities of computer storage devices are in gigabytes. This enables them to store huge chunks of data. Moreover, these devices are compact. They occupy very less space, yet store large amounts of data. Both teachers and students benefit from the use of computer technology. Presentations, notes and test papers can be stored and transferred easily over computer storage devices. Similarly, students can submit homework and assignments as soft copies. The process becomes paperless, thus saving paper. Plus, the electronic format makes data storage more durable. Electronically erasable memory devices can be used repeatedly. They offer robust storage of data and reliable data retrieval.

G. This was about the role of computers in education. But we know it's not just the education sector which computers have impacted. They are of great use in every field. Today, a life without computers is unimaginable. This underlines the importance of computer education. Knowledge of computers can propel one's career in the right direction. Computers are a part of almost every industry today. They are no longer limited any specific field. They are used in networking, for information access and data storage and also in the processing and presentation of information. Computers should be introduced early in education. I don't think I am making an overstatement in saying that computer education is as fundamental as learning English. Yes, it is.

(http://www.ehow.com/about_6627677_role-computers-education.html)

IV. Answer the questions. Give full sentences.

1. Have computers become an integral part of education system?

2. What are the advantages of computers in education?

3. Can online education be beneficial?

4. What can be of great help to teachers while delivering lectures?

5. Why does the Internet play an important role in education?

6. What do computers enable students to do?

7. Are computers of great use in every part of our life?

V. Say whether these sentences are true or false. Try not to refer to the text.

1. Computers are mostly important in science and medicine.
2. Due to computers imparting education has turned to be more fascinating.
3. Networked computers can't help in anything.
4. Slow data processing is one of the advantages of computers in education.
5. It's more difficult to find necessary information in the Internet than in books.
6. Education is no longer restricted to classrooms thanks to computers.
7. The same old information comes forth in different way and learning becomes a real bore.

VI. Find 3-4 key words in every paragraph. Write down the sentences of your own using these words. They should give the main idea of each paragraph.

VII. Choose necessary phrases from Appendix 2 and write a summary of the text.

Optional exercises.

VIII. Make the questions to the given answers.

1. IT lessons are a part of school curriculum.
2. Computer technology has had a deep impact on the education sector.
3. Computer teaching plays a key role in the modern education system.
4. Physically distant locations have come closer due to the Internet accessibility.
5. Teachers hardly use chalk and board today.
6. Both teachers and students benefit from the Internet and computer technology.

IX. Use a monolingual dictionary and find synonyms and antonyms to the following words:

e.g. task- exercise, task- solution

impact, impart, retrieve, adjust, submit, key, enable, aid, vital, include.

X. Translate from Russian into English and make the sentences of your own:

процветать, вместимость, ограничивать, поддерживать, приспосабливаться, содействовать, вследствие, использовать, стимулировать, выделять.

XI. Complete the sentences below with the correct words from the text.

1. Computers ……… a vital role in every field.
2. Networked computers …. quick communication and enable web access.
3. Students….. it easier to refer to the Internet than searching for information in fat books.
4. Computer technology has made the dream of ……… a reality.
5. Computers facilitate audio-visual …….. of information.
6. Internet can be harnessed for …… of information on a variety of subjects.

Unit 3
Uses of Computers in Scientific Research

I. Read the following paragraph, agree or disagree, give your reasons. Make notes if necessary.

Computers have been valuable tools for scientific research since their development in the 1940s. Computers have changed the ways in which scientific research is compiled and analyzed. Scientists, engineers and researchers alike are able to compile vast amounts of data and leave it to the computer to work through the data while focusing on another area of the research project. This creates research results with fewer errors and better-engineered products.

II. Read the text quickly to compare your notes with the author's opinion.

Computers play a major role today in every field of scientific research from genetic engineering to astrophysics research. While they are still far away from that supreme ideal of being able to think for themselves as artificially intelligent machines, the brute force of their ability to calculate and process information at phenomenal speeds powers research in every field of human endeavor. In fact, computers have changed the way in which information, or more precisely, knowledge is disseminated around the world through the Internet.

Computers used in scientific research enable researchers across the country to share data. Computers have changed the ways in which scientific research is compiled and analyzed. Scientists, engineers and researchers alike are able to compile vast amounts of data and leave it to the computer to work through the data while focusing on another area of the research project. This creates research results with fewer errors and better-engineered products.

Complex Data Analysis. Computers used in scientific research have the ability to analyze data in ways and at speeds not possible with the human eye. They are able to analyze percentages of materials present in a variety of compounds from soil samples to chemicals and even the air you breathe.

Additionally, computers used in this manner can determine trends in data samples. For example, computer analysis of data in research could determine the temperature at which certain chemical compounds break down or the percentages of improvement patients show when administered a certain medication. Analyzing tons of statistical data is made possible using specially designed algorithms that are implemented by computers. This makes the extremely time-consuming job of data analysis to be a matter of a few minutes. In genetic engineering, computers have made the sequencing of the entire human genome possible. Data from different sources can be stored and accessed via computer networks set up in research labs, which makes collaboration simpler.

Scientific Simulations. One of the prime uses of computers in pure science and engineering projects is the running of simulations. A simulation is a mathematical modeling of a problem and a virtual study of its possible solutions. Problems which do not yield themselves to experimentation can be studied through simulations carried out on computers. For example, astrophysicists carry out structure formation simulations, which are aimed at studying how large-scale structures like galaxies are formed. Space missions to the Moon, satellite launches and interplanetary missions are first simulated on computers to determine the best path that can be taken by the launch vehicle and spacecraft to reach its destination safely.

Solving Mathematical Equations. Scientific research often requires that complex mathematical equations be solved in order to determine if data is valid or if a certain structure of molecules will remain stable. Computers are integral to this calculation process since scientists can write software programs specifically to provide answers to such questions. This removes the element of human error, which can cost research institutions millions of dollars in fixing a product that was created with even the smallest amount of flawed data.

Prediction Modeling. Scientists and researchers are able to use computer programs to model how data might manifest itself in the future. This ability is useful in predicting climate patterns, simulating how engineered products might

perform in the field, predicting the erosion rate of beaches and anticipating the absorption rate of medications in the body. Scientists and engineers are then able to adjust building strategies or chemical compositions of products to ensure safe operation and consumption.

Instrumentation Control. Most advanced scientific instruments come with their own on-board computer, which can be programmed to execute various functions. For example, the Hubble Space Craft has its own on-board computer system which is remotely programmed to probe the deep space. Instrumentation control is one of the most important applications of computers.

Knowledge Sharing Through Internet. Lastly, in the form of Internet, computers have provided an entirely new way to share knowledge. Today, any one can access the latest research papers that are made available for free on websites like Arxiv. Sharing of knowledge and collaboration through the Internet has made international cooperation on scientific projects possible. Through various kinds of analytical software programs, computers are contributing to scientific research in every discipline, ranging from biology to astrophysics, discovering new patterns and providing novel insights. When the work in neural network based artificial intelligence advances and computers are granted with the ability to learn and think for them, future advances in technology and research will be even more rapid. If we survive human strife and manage not to self destruct our civilization, future is going to be an exciting time!

(http://www.buzzle.com/articles/role-of-computers-in-research.html)

III. *Read the text again and answer the questions:*
1. How have computers changed the ways of scientific research?
2. What are computers able to do?
3. How do computers analyze data?
4. What is scientific simulation?
5. What does computer help to remove while solving mathematical equations?
6. What is prediction modeling?

IV. Say whether these sentences are true or false. Try not to refer to the text.

1. Computers can think for themselves.
2. Computers don't help researchers to share data with each other.
3. Computers can analyze different kinds of data.
4. Computers don't help to save time.
5. Computers can run scientific simulations.
6. Scientists can't write software programs to solve mathematical equations.
7. Scientists and researchers cannot operate computer programs to model how data manifest itself in the future.
8. Through different kinds of analytical software programs, computers are preventing from scientific research.

V. Make up a plan of the text and summarize the text in brief.

Optional exercises.

VI. Give synonyms and antonyms to the following words:

endeavour, share, disseminate, time-consuming, run, yield, process, grant.

VII. Translate from Russian into English.

составлять, определять, уступать, управлять, распределять, стараться.

VIII. Complete the gaps with the words given:

ability, arithmetic, computers, development, digital, logical, machines, multistory, perform

The first….. developed were mere calculators, with the…. to carry out simple …. operations. Advancement in electronics, the … of the vacuum tube based transistors and devising of …. logic gates led to development of the first digital computer which could …. more advanced … operations. These early … took up whole …buildings and were operated through punch cards.

Unit 4
Use of Computers in the Medical Field

I. Pre- reading task

Read the statement and decide whether you agree or disagree. Think about your reasons.

'Computer is so important these days that running the health sector without it is just impossible.'

II. Read the text using a dictionary if necessary.

Once used primarily as back-office record keepers and financial calculators, computers and their networks now play increasingly significant roles in patient care. They are increasingly used by health-care practitioners for patient information, record keeping, communicating with colleagues, devising strategies for patient care, interpreting lab results, and research. The fast processors and large memory capacity of today's computers, along with the Internet and other networks, have expanded the role of computers into virtually every aspect of health care. From the moment a patient walks into a hospital, doctor's office or clinic, computers are involved in his or her care. Patient information is often entered electronically to generate an electronic chart. Some organizations integrate this information with practice management software, helping staff schedule patient procedures and manage the financial matters.

Computer workstations in exam rooms can now allow clinicians to access patient information, lab results, and educational material. Some radiology departments have begun to use digital "filmless" imaging technologies, and computers are even slowly entering the chaotic environment of the operating room, where perioperative nurses use workstations to document procedures.

Computers are being used to help avert medical errors critical need, since, according to an Institute of Medicine report important, an estimated 44,000 to 98,000 Americans die each year from preventable errors. Computer systems in some hospitals monitor patients in intensive-care units or operating rooms, alerting clinicians to anything abnormal, such as a sharp decrease in hemoglobin levels, for example. Instead of writing prescriptions on paper, some clinicians now use computer based systems that not only suggest drug dosages but check for allergies

and interactions as well. Some clinicians also use handheld computers to enter patient notes and check medical references.

In addition to computerizing individual hospital departments, computers are being used to tie disjointed departments together and to standardize health care information over the entire industry. Aside from promising monetary savings and improved efficiency, such departmental integration is expected to help hospitals adhere to insurance company and government requirements.

The Internet has quickly become an integral part of health care. Patients can check their medical records, research drug interaction information, or find information on clinical trials and experimental medical treatment. Health care practitioners use the Internet for research, to gain continuing medical education (CME) credits, and to check patient information. To help manage this information overload, several websites provide customized health information and access to research tools such as the National Library of Medicine's Medline/Pub Med, a search engine that provides access to millions of citations from research journals. The Internet can also educate people about disease prevention and help them adopt a healthy lifestyle. Specialty websites, whose topics range from mental health to infectious diseases, allow individuals to conduct disease screenings and lifestyle and quality-of-life assessments.

In addition, government health organizations use the web to provide public health information to state and local health departments, health professionals, and the general public. The World Health Organization (WHO) and its member organizations have created a vast global computer network called the Library and Information Networks for Knowledge (LINK); the agency also supports an electronic database called WHOLIS. Both the library and the database support the WHO's mission to improve international public health. Once a communicable disease outbreak has been confirmed, for example, information is placed on the web for the general public.

Several Internet applications can even provide telemedical services, such as long-distance mammograms to underserved women. Other applications help patients suffering from chronic diseases such as asthma, diabetes, and heart disease to monitor their conditions. Still another computer program allows diabetics to download data from a blood glucose meter, enter information about their medications, diet, and symptoms, and transmit this data to healthcare providers.

Although computers have improved patient care, administrative efficiency, and disease tracking, their increasing use also poses several challenges. Consistent, standardized data coding is one example. Maintaining patient privacy is another concern. In an electronic world of integrated departments and shared databases, patient confidentiality can be difficult to maintain unless great care is taken with sensitive patient information (like HIV status or drug-abuse history), and staff is

trained to protect the confidentiality and security of patient information. Another consideration: making sure technology is reliable enough to be trusted. Poorly designed pharmaceutical software could result in drug errors, for example.

Nurses, who have traditionally gathered, stored, and maintained patient information, have an especial need for computer training. Even beginning nurses should have basic word processor, database, spreadsheet, and E-mail skills, according to a panel of researchers affiliated with the American Nurses Association (ANA). As computers become ever-more integrated into patient care, disease prevention, and health promotion, as well as into medicine's administrative processes, nurses need information literacy as much as they need computer literacy. This means that they must be able to recognize when information is needed and know how to track down and use it appropriately, according to the ANA panel.

(http://www.buzzle.com/articles/use-of-computers-in-the-medical-field.html)

III. Read the sentences and decide whether they are true or false. Correct the false sentences.

1. A computer has become an effective commodity in every hospital.

2. Patient information is hardly ever entered electronically to generate an electronic chart.

3. Computer systems in some hospitals are not able to monitor patients in intensive-care units or operating rooms.

4. Some clinicians also use laptops to enter patient notes and check medical references.

5. Computers are being used to link combined departments together and to standardize health care information over the entire industry.

6. The Internet can't educate people about disease prevention and help them adopt a healthy lifestyle.

IV. Answer the questions. Give full sentences.

1. What role does computer play in patient care?

2. Which departments use computers in hospitals?

3. Has Internet quickly become an integral part of health care?

4. What have the World Health Organization created?

5. What kind of applications can Internet provide?

6. What do nurses traditionally do?

V. a) Divide the text into several parts.

   b) Find key words for every part.

   c) Write down the main idea of each part in one sentence.

VI. Make a summary of the text. Use Appendices 1,2 if necessary.

Optional exercises.

VII. Make questions to the following answers:

1. Computers are increasingly used by health-care practitioners.

2. From the moment a patient walks into a hospital computers are involved in his or her care.

3. Electrocardiograms and tests are often analyzed initially by computer programs to save staff time.

4. 44,000 to 98,000 Americans die each year from preventable errors.

5. The federal Health Insurance Portability and Accountability Act (HIPAA) was designed to protect confidential health care information.

VIII. Match the words from I to the synonyms from II.

   I. adhere, affiliated, augment, avert, estimate, expand, generate, monitor, preventable

   II. avertable, combined, develop, enlarge, observe, prevent, produce, stick, value

IX. Fill in the gaps with the words given.

to access, create, data, health, integral, be obtained, security, teach

1. Those looking for well-paying professions that can offer job ……would do well to consider getting into ……. informatics.

2. With all of the medical data that must be ……. and secured, a health information technician is an ……. part of a medical facility's staff.

3. People in this profession …… systems to acquire, store, maintain, and …… patient health data.

4. They also …… healthcare professionals like nurses how to operate programs ……. the information they need.

X. Choose one of the topics and make a presentation or a report.

1. Health Informatics.
2. MUMPS- a programming language.
3. Artificial Intelligence in Medicine.

Unit 5
Computers in Business

I. Comment on the following B. Gates' statement:

"Nowadays the use of computers in business management and other industries is evident, owing to the fast processing of procedures and timely deliverables… I think it's fair to say that personal computers have become the most empowering tool we've ever created. They're tools of communication, they're tools of creativity, and they can be shaped by their user'.

II. Read the text to find out more about computers in business. Use a dictionary if necessary.

In an age of booming technology, running a business without computers is like trying to breathe without lungs. Like it or not, technology has become an integral part of the way business is done. Even if you perform services or provide products which are not technology related in and of themselves -- such as dry cleaning and hairstyling -- you may find that without a computer, it's difficult to place orders with suppliers or pass information to your accountant.

Retail and wholesale business have increasingly come to rely on computers' advanced ability to keep track of inventory and assist in ordering more when stocks get low. In fact, one of the central approaches to the success of retail giant WalMart was real time ordering in which WalMart's computer systems place orders for goods as they are needed. This allowed them not to carry too much or too little of any particular item as well as to save on the manpower required to manage much of the supply chain. However, businesses of all sizes use inventory management and point of sales systems to do smaller scale versions of the same thing.

While it's still possible to find a typewriter at a garage sale, the days of typed papers and documents are dead and gone. Word processing is a must in today's business environment. Not only are computers the medium for document creation, but the ability to email and share documents electronically has become central to the editing, approval and delivery process. Similarly, presentations and reports are commonly delivered in electronic slide show presentations or via webinars. Creators must use programs, such as PowerPoint, to create them as this is the standard for modern business.

A business not involved in electronic communications -- particularly email -- closes off one of the largest communication channels today. Customers, clients, vendors and business partners use email to make contact and transact business. Some companies go beyond email and actually encourage the use of in-house instant messaging as a method of communications between employees and departments.

Internet access is a business' communications lifeline. Internet-enabled computing allows you to receive orders from customers, place orders with suppliers, research businesses, explore business ideas, communicate with government agencies and even manage your business' banking. In addition, online presence with at least a website is critical to legitimizing a business. Many companies go further and participate in social networking sites for marketing and branding purposes.

If your business has more than one site or branch, then multi-site networking provides tremendous benefits for accounting, standardizing and managing your multi-faceted operation. Many companies use point of sale systems to ensure standardized operations within a chain of stores or sites. Companies that sell similar products or services in multiple locations find that computer systems help them keep track of revenues, costs and their supply chain from a central office.

This allows a centralized management team to get reports on any or all sites and get a macro-view of the business when needed.

(http://smallbusiness.chron.com/businesses-computers/)

III. Answer the questions. Give full sentences.

1. Is it difficult to run business without computers?

2. What is real time ordering?

3. Why is a word ordering a must in today's business environment?

4. Who uses email to make contact and transact business?

5. What does Internet-enabled computing allow people to do?

IV. Say whether these sentences are true or false. Try not to refer to the text.

1. Retail and wholesale business have increasingly come to reject computers' advanced ability to keep track of inventory

2. The days of typed papers and documents have never gone.

3. A business is not involved in electronic communications.

4. Nowadays you can easily run a business without a computer.

5. A business involved in electronic communications opens one of the largest communication channels today

6. Computer usage in business is not widespread.

V. In pairs, look at the given words. Try to guess what they mean from the context. Then check with your dictionary or the teacher.

Approval, encourage, ensure, explore, involve, participate, provide, related, rely on, transact.

VI. Fill in the gaps with the words given:

be loaded, computers, configuration, hard drives, needs, network, operating, purchased, stores.

1. Free-standing …. are the familiar variety sold in most …. and used in most homes and small offices.
2. They're complete systems in their own right, containing …… and optical drives for storage, as well as their own processors, video cards, RAM and ….. systems.
3. These machines can be ….. in laptop, desktop or tower formats, as the company's ….. dictate.
4. Each can ……. with programs on an individual basis, or in a standard ……. determined by the company.
5. They can be part of the company ……., but don't require the network to operate.

VII. The given sentences are jumbled. Put them in the right order.

A. However, thin clients are bare-bones computers with minimal internal hardware.

B. Thin clients look and act just the same as a conventional standalone computer, from the end user's viewpoint.

C. For companies with a large number of work stations, the cost of purchasing and upgrading thin clients represents a significant saving over full-blown standalone computers.

D. They still have a mouse, a screen and a keyboard, and the user works with the computer in exactly the same way.

E. They're connected to the company's network, where heavy-duty servers store the programs and data and provide the processing power.

VIII. Make questions to the given sentences.

1. Servers are the heavyweights of the business computing world.
2. They're machines optimized to use powerful, efficient microprocessors and high-speed connectivity.
3. They're designed to be used together in groups, or clusters, so companies can simply add servers as they grow.
4. Servers use powerful multi-user operating systems.
5. Some are based on Microsoft Windows, while others use Unix, Linux or older proprietary operating systems.
6. Server clusters are used in the same ways as old-school mainframe and mini-computers, to provide heavy-duty computing power for a company's networks and Web page.

IX. Talk about computers in business using all the information from the text and exercises. Follow the plan:

a) The role of computers in business.

b) Types of computers used.

c) Ways of computer usage.

X. Work in pairs. Discuss the topics given.

1. Wireless computers vs. wired computers in business.
2. The best way to start a computer repair business.
3. Three different types of computers for use in business.

Unit 6
Use of Computers in Agriculture

I. Before you read the text answer the following questions.

How can computers and agriculture be connected?

What do you think e-agriculture is?

II. Read the text and check your answers.

Computers and their applications have changed the face of most traditional occupations including agriculture. From computerized milk collection and seed estimators to weather predictions and automated farmland assessment, computers have revolutionized farming practices.

Technological advances have brought about drastic changes in farming and animal husbandry resulting in tremendous increase in production capacity. The most common use of computers has been in replacing human effort and intervention in traditional farming machinery and other equipment. In addition, even the support functions for farming such as delivery of machinery, fertilizers and production of raw products have been successfully automated. But all these are just the labor-saving, basic uses that have been around even before the turn of the century. If computers have changed the ways of farming, then the Internet has only doubled that pace of change.

In today's times, agriculture is not just about crop production or livestock farming and associated activities. The challenges brought forth by ecological factors affecting the environment need to be a major consideration for any kind of farming activity. Farmers need to preempt environmental impact due to climate change and this is where modern technology comes to the rescue.

Geographic Information Systems (GIS) are being used for developing ranking systems that evaluate land and provide a site assessment to aid what is now known as precision agriculture. These hi-tech, interactive systems provide information based on a variety of factors such as soil conditions, drainage and slope conditions, soil pH and nutrient status, etc. Prior to the use of these systems, farmers were often in the dark about soil output, and unpredictable weather conditions affecting crop quality and profitability. Precision agriculture provides farmers with control by predicting vital information including fertilizer application and problems with drainage, insects, and weeds. Most government websites provide this kind of information free of cost, covering agricultural land masses across the United States. Global Positioning System (GPS) based technologies also help to monitor irrigation, field mapping, soil sampling, tractor guidance and crop scouting. This kind of technology equips farmers with enough information to

increase crop yield in a manner that is consistent with the best environmental practices for sustainable agriculture.

Automated farm equipment, needless to say, scores over human controlled equipment in terms of consistency and reliability. Engine and machine functions such as transmission and hydraulic power output are controlled using microchips built into the equipment. Guidance technology is already being widely used in self-propelled equipment to aid crop seeding and fertilizer application. Automated feeding systems, computerized milk collection and milking machines have been around since the late 20th century, resulting in better economic yield for the dairy industry as well as livestock production. Automated tractors are probably not far away.

With regard to livestock farming, ready-made computer applications are available to track individual animals, storing and evaluating information such as age, health records, milk production, offspring productivity, and reproductive cycle status. This is often called herd recording. Similarly, most farm accounting software and other computer applications in agriculture provide services for record keeping, simulation of prediction-based models using that data, revenue and productivity estimation and reporting to aid in making decisions. Most farm software vendors provide you with an option to customize their applications to the specific needs of your farm or ranch.

Any business in the world that you can think of has benefited from the advent and global reach of the Internet and related communication technologies (mobile computing, e-commerce etc.). Agriculture is no different. Imagine leveraging the power of the Internet to connect with farmers, agriculturists and agricultural scientists and other experts spread across the globe from the comfort of your own farmland or ranch. There are several forums and social networking sites on the Internet where farmers can connect with other farmers and farming experts and exchange know-how. In addition, there are several learning repositories serving as knowledge bases to provide information on a wide variety of agricultural topics. These avenues serve to reduce the rural digital divide, influence public policies, foster partnerships and connect all stakeholders across the agricultural value chain. For instance, a farmer can easily seek out and connect with an agricultural entrepreneur and begin the exchange of ideas or business proposals. Information such as price review for grain and livestock, pest information, real-time weather information (precipitation, temperature, humidity, solar radiation, wind speed, soil moisture and soil temperature) in any part of the world is literally available on one's fingertips.

An emerging field of agricultural practices, e-agriculture focuses on coming up with innovative ways and best practices to use the existing information and communication technologies (ICTs) for sustainable agricultural development and food safety standards, particularly in rural areas. E-agriculture encompasses other related technological fields such as agricultural informatics, agricultural development and business. It aims to deploy all available technologies (computers,

mobile computing, satellite systems, and smart cards) for the empowerment of farmers and strengthening of partnerships across the food value chain.

The uses of computers in agriculture do have some real constraints such as, the lack of hardware and software infrastructure, training and skills, and research priorities. However, once these are overcome, the use of computers transcends automation and software application. In fact, it could be instrumental in bridging the rural digital divide and bringing prosperity to agriculturists not only in the United States, but also in other developing and emerging economies around the world.

(http://www.buzzle.com/articles/uses-of-computers-in-agriculture.html)

III. Answer the questions using the information from the text:

1. What is the most common use of computers in agriculture?

2. What is GIS?

3. What is GPS?

4. What is called 'herd recording'?

5. How does agriculture benefit from the Internet?

6. What is the aim of e-agriculture?

IV. Say whether these sentences are true or false. Try not to refer to the text.

1. Technological advances have brought about slight changes in agriculture resulting in tremendous decrease in production capacity.

2. There are no interactive systems which can provide farmers with necessary information.

3. Automated farm equipment is not consistent and reliable.

4. Agriculture cannot benefit from the Internet and related technologies.

5. E-agriculture is a disappearing field of agricultural practice.

V. Here are some key words taken from the text. Use them to give the main idea of each paragraph.

E-agriculture, Internet forums, Social Networking, Online Knowledge Bases, farm software, farmland assessment, autonomous farm equipment, applications of computing technologies in agriculture.

VI. Write a summary of the text and render it.

Optional exercises.

VII. Match the words in 1 with their synonyms in 2:

1. advent, capacity, crop, emerge, equip, foster, husbandry, pace, precision, rescue, stakeholders

2. accuracy, arise, arrival, concerned parties, content, encourage, farming, fit out, harvest, save, speed

VIII. Give the definitions to the following words and phrases. Check with your teacher or a dictionary:

Avenue, consideration, labour-saving, preempt, self-propelled equipment, sustainable agriculture, to be in the dark, vendor.

IX. Complete the gaps with the words given:

access, enhancement, extent, ownership, rely, rural, satisfied, similar, software, technologies.

1. Agronomists ….. increasingly on computers, and more than half of all producers have …… to computers.

2. Increasing farm computer …… has resulted in intensified efforts to transfer new …… technologies to producers.

3. However, little is known about how …… producers are with computers and the …… to which computers are actually used.

4. Farming experience showed …… conflicting results as education, i.e., greater number of years farming …… in significantly increased computer satisfaction but lower frequency of use and number of software applications use.

5. E-Agriculture is an emerging field focusing on the …… of agricultural and …… development through improved information and communication processes.

X. Work in pairs. Make a presentation about forums and social networking sites where farmers can connect with each other and farming experts.

Unit 7
Benefits of Green Computing

I. Before you read the text answer the questions:

Are computers power-consuming or energy-efficient devices?

Can we save energy while operating a computer?

What is vampire power?

What is cloud computing?

II .Read the text and check your answers.

As energy crisis deepens and the resources deplete, we need to think seriously about making substantial changes in our lifestyle for energy conservation. Green computing is one way of dealing with the energy crisis. It is possible to reduce carbon emissions, save energy and protect the environment as a whole with this approach.

Green computing is the practice of using computers and related technology in an environmentally responsible manner. It aims at radically changing the way we go about computing, using the electronic devices and following strict energy conservation guidelines, so as to minimize the damage caused to the environment by computers. This activity is not just limited to saving electricity, but also takes a holistic approach towards environment-friendly use of computers. Devising innovative and environment-conscious techniques for energy generation is also one of its aspects.

There are many innovative technologies and tools which make green computing a viable option for judicious energy usage and environmental conservation.

Touted as a technology that could save substantial amount of energy, cloud computing involves replacing regular servers with the virtual ones. Different areas where cloud computing finds its application include data storage, networking, operating systems and software applications. It is possible to save as much as 90% of the energy spent in a company of 100 employees.

Through recycling we can save precious energy, time and money spent in manufacturing these electronic items. Resources used and money spent in manufacturing an electronic item from scratch are far greater than those needed for recycling it. Even in developed countries like USA, only a small percentage of discarded or used electronic items are recycled. France, which is said to be an ecology-responsible country, collects only 14% of the e-waste generated in the country. Thus, there is a great scope for recycling electronic items and thereby, preventing environmental damage. Conservation of environmental resources, electricity and money can be achieved through this simple-to-implement step.

The practice of switching off computers at night helps in saving a considerable amount of energy. The estimated amount of energy spent in a single year due to round-the-clock use of computer is $115-$160. Running your computer just 8 hours a day can help save 810 kWh energy on an annual basis. It is a myth that turning the computer off can damage it. Computers are designed for sustaining around 40,000 on/off cycles. Therefore, you need not worry about the computer even if you have to turn it off on a regular basis. The power supplied to scanners and printers should be cut off whenever these devices are not in use. This practice can also save a considerable amount of energy.

Green computing measures can be used for improving the algorithmic efficiency of computers. An efficient algorithm makes minimum use of resources. Therefore, the productivity increases manifold. A simple computing activity like searching for information on a search engine can have an adverse impact on the environment owing to the energy consumed and CO_2 emitted in the process. Thus, without improving the algorithmic efficiency, one cannot expect much in terms of energy conservation even from cloud computing.

Remodeling the IT architecture that is currently used should prove to be beneficial in the long term. It is not just about following a set of best practices, but also about overhauling the architecture as a whole. A strategy needs to be devised for the development of sustainable technology. This approach is not limited to changing architecture of data centers. In fact, business operations, IT facilities, communications and many other aspects of computer usage need to be taken into account. For example, one can reduce the number of systems being used and increase their efficiency. It is kind of a long-term approach in which the currently used "green" initiatives might change with time. However, the underlying idea of reducing energy consumption and causing minimum damage to the environment remains the same. Merely adding to the density of virtual servers also won't help much. In fact, increasing the rack density through virtualization would necessitate the installation of cooling systems, which again increases the cost and energy consumption. Changes in the architectural designs will increase the accessibility to sophisticated technologies that cause minimum harm to our planet's resources.

Commonly referred to as electronic waste, techno trash refers to the toxic elements that are found inside electronic goods. Therefore, the disposal of such kind of waste has to be carried out with proper care.

Using ENERGY STAR qualified products help in energy conservation. The Climate Savers Computing Initiative (CSCI) catalog can be used for choosing green products. Organic light-emitting diodes should be used instead of the regular monitors. Surge protectors offer the benefit of green computing by cutting off the power supply to peripheral devices when the computer is turned off. Donating your old computers and other peripherals can reduce the rate of e-waste creation. Moreover, those who cannot afford to buy a computer can benefit from such donations.

Through proper disposal of computers and its accessories, it is possible to reduce environmental pollution. It was expected that computers would help reduce

paper wastage. However, even today wastage of paper is a serious issue in industries. The easy availability of photocopiers and printers is also one of the culprits behind unchecked paper wastage. Think twice before using printers. Use the device only if it is necessary. The manufacturing of disks and boxes needed for video games takes up a lot of resources. Video game manufacturers can offer their games online for download, leading to reduction in e-waste. This move can cut down on the transportation/shipping cost. Use of 'Local Cooling' software can help in monitoring and thereby, bringing down the energy consumed by your computer. This 'Windows' program makes adjustments to the power options of your computer and helps minimize energy consumption.

(ww.buzzle.com/articles/benefits-of-green-computing.html)

III. Answer the questions using the information from the text.

1. What are the advantages of Green Computing?
2. Where can Cloud Computing be applied?
3. Are there many countries that recycle used electronic items?
4. Why is it so important to turn your computer off?
5. What are Green Computing measures used for?
6. What is techno trash?
7. Why is it important to remodel the IT architecture?
8. What do surge protectors offer?
9. Has the problem of reducing paper wastage been solved?

IV. Say whether these sentences are true or false. Try not to refer to the text.

1. Green Computing is the only way of dealing with energy crisis.

2. Cloud Computing can be used in limited areas.

3. In the USA a great amount of used electronic items is recycled.

4. It makes no difference whether you switch your computer off at night or not.

5. An efficient algorithm makes maximum use of resources.

6. Donating old computers is not beneficial.

7. Nowadays the problem of paper wastage is solved.

V. a) Divide the text into several parts.

b) Find key words for every part.

c) Write down the main idea of each part in one sentence.

VI. Make a summary of the text. Use Appendices if necessary.

Optional exercises.

VII. The given sentences are jumbled. Put them in the right order.

1. In such a scenario, saving electricity becomes a high priority.

2. In countries like USA, emission of greenhouse gases resulting from the generation of electricity is quite high.

3. Thus, green computing can play a major role in protecting the environment through electricity conservation in developed countries.

4. The total volume of gases emitted through electricity generation is much higher in comparison to that from vehicles.

VIII. Fill in the gaps with the words given:

computing, consumption, decrease, efficient, encourage, fuels, industry, minimize, to protect, protecting.

1. Till recently, the drive …… the environment was limited only up to certain areas like saving …… , reducing carbon emissions, etc.

2. However, green ……. adds a new dimension to the movement aimed at …… the environment.

3. Taking up the cause of green computing should …… engineers and designers to create innovative and energy …… computer models.

4. For example, a company like Google Inc. was able to …… energy ……. significantly.

5. They were able to ……. the energy consumption to a level of 50% of the …… average.

IX. Form adjectives and verbs from the given nouns.

e.g. explanation- explaining- explain

1) depth, 2) response, 3) limit, 4) prevention, 5) availability, 6) reduction.

X. Match a word in A with the word in B.

A) cause, data, electronic, energy, paper, power, prevent, protect, reduce, save

B) conservation, damage, device, energy, environment, harm, pollution, storage, supply, wastage.

XI. Make questions to the given answers:

1. The most important benefit offered by green computing is that you can influence and motivate a large number of people and make them aware of environmental issues.

2. The reason why green computing can play a major role in environmental conservation is that computers are items of day-to-day use

3. While using computers, people would constantly be reminded of their responsibility towards the environment.

4. Thus, apart from offering actual benefits of green computing, all these practices would motivate computer users to find new ways and new areas where they can implement green measures for energy conservation.

Unit 8
Uses of Old Computers

I. Read the statement below, say whether you agree or not. Give your reasons.

"With the availability of brand new laptops and desktop computers, people tend to discard their computers as soon as they become old or stop functioning. They go for replacement over repair."

II. Read the text and match the paragraphs (1-8) to the titles (A-H):

   A Trial and Error

   B Backup and Occasional Use

   C Sell, Recycle or Donate

   D Personal Entertainment System

   E Video Game Station

   F Television and Video Recorder

   G File Database

   H External Hard Disk

1. This is probably considered to be the most common choice of users planning to purchase a new computer. If the PC is in running condition and has a decent hard drive space, you can use it as a personalized entertainment console. You can install software for playing audio files, a DVD drive, a powerful speaker system, and other devices in a typical entertainment system. You can even arrange web access on this system, in case you want to play online radio or watch movies.

2. If you are a user with several computing devices, you can create a file database by using the old system. You simply have to increase the hard drive space of the old computer, establish a wired or wireless connection by using a Network-attached Storage (NAS) device, and start accessing the database through your

personal laptop. With this, you can retrieve data when you need it, without having it stored on the hard drive of your new computer.

3. If you do not want to use the old system for any purpose, you can make some money by selling it online. There are many sites that you can use like eBay or Craig's list where you can get good deals. Now this applies to a PC which is in working condition. Selling is one of the uses of an old computer in the sense that you can use it to make some money. Recycling is another way of computer disposal. There are recycling programs whereby you can make money by recycling your old computer. Now, isn't that a use for old computers? Or donate. Yes, donating your old computer to someone in need of it is a great way of putting it to good use.

4. In case most parts of your computer have become dysfunctional but the hard drive is still worth using, you can consider using the computer as a means of external storage. You can use your old computer as your 'customized' external hard disk. You will need to spend a few bucks on the USB and adapters though.

5. Another option for using an old computer is to set it up as a 'trial and error' machine. If you do not want to try out various third-party software and hardware on your new laptop, you can certainly use the old system. You can try out different applications, new operating systems, and similar utilities. You can even hand over the system to your children for understanding the basics of computing by installing educational software, typing practice programs, memory games, etc.

6. If the CRT monitor has no display problems, you can use it uniquely. You can make a TV or program recorder out of it. Note that you will need some devices for doing so, like an external TV tuner card and an aerial cable. Using the software that comes along with the TV tuner, you can even record TV shows. This is surely the best way an old CRT monitor can be used.

7. Your old computer can even serve as a backup in case of emergencies, when you don't have your laptop. Maybe you need to send an important email or create a presentation. Your guests may want to use a computer, which is when you can

have them use the old one. In this case though, you will have to ensure that the computer is in working condition, and that it at least performs its basic functions.

8. Instead of giving your system in scrap, it is a good idea to upgrade it and use it as a home gaming console. Instead of loading and playing games on your laptop, you can use your old PC for this kind of entertainment. With just a graphics card and some video and audio drivers, you can start using the gaming system. If possible, have web access ready for enjoying online games. With this you can separate gaming and entertainment from personal data and software you work on.

These are believed to be the best ways of using old computers. There are many other creative ways such as using the computer case as a letter box at the gate, an office coffee pot, a resting place for your pet; or simply using the mouse as a toothbrush holder. You can be as creative as your want with using old computer parts.

(http://www.buzzle.com/articles/uses-of-old-computers.html)

III. Answer the questions using the information from the text. Give full answers.

1. Is it possible to transform an old computer into a personalized entertainment console?

2. Why is it necessary to increase the hard drive space of an old computer?

3. Is it beneficial to sell or donate your old computer?

4. What is a 'trial and error' machine?

5. It's impossible to make a TV from your old computer, isn't it?

IV. Say whether these sentences are true or false. Try not to refer to the text.

1. You can't put old computers to good use.

2. It's very difficult to create a file database by using the old system.

3. Selling an old computer is the best way to benefit from it.

4. The worst way of using the CRT monitor is to turn it into TV.

5. You shouldn't take old computers as a backup because they brake easily.

6. There are no many ways of using old computers.

V. a) Divide the text into several parts.

b) Find key words for every part.

c) Write down the main idea of each part in one sentence.

VI. Make a summary of the text. Use Appendices if necessary.

Optional exercises.

VII. Make questions to the given sentences.

1. With technology continuing to advance all the time, many users will be tempted to replace their computer every couple of years with a newer and faster model.

2. Old computers are just slow computers with an outdated selection of ports, less storage and RAM, and generally paltry graphics cards.

3. You can you can turn a hard drive into a laser light show projector, make a steam punk clock, or turn it into a smart phone stand.

4. If you have been storing old computers and parts for years and you have lots of them now, it is just about time you switch on your creativity machine and see if you can build some furniture out of all those parts.

5. Since most of the circuit boards inside the PC are greenish in color, they could be used perfectly with a Christmas tree to give it an enhanced look.

VIII. Give synonyms to the words given.

Install, choice, donate, decent, utility, laptop, hand over, backup, upgrade.

IX. Fill in the gaps with the words given:

abundant, dispose, fortunate, machine, opportunity, progress, repurpose, stewards, technology, vintage.

1. We are very ……. to live in a time when remarkable technology is ……. and cheap.

2. However, technological …… doesn't excuse us from being good ……. of "last year's" computer.

3. It takes effort (and maybe even a little money) to ……. , reuse or properly …….
of an old PC.

4. Old PCs present an …… to help others and keep a useful …… out of the
landfill.

5. Certain personal computers are considered **……..** . These computers have
historic significance and importance because of the new ….. they introduced.

X. Make a presentation: "5 great ways to use your old computer".

Unit 9
What Are Supercomputers Used For?

I. Before you read the text answer the following questions:
Have you ever seen a Supercomputer? Can you describe it?
Where are they applied?

II. Read the text to learn more about Supercomputers.

If you go by the movies, the term 'Supercomputer' conjures up visions of a very super smart, evil genius machine that is up to no good. On the contrary, supercomputers are in fact do-gooders, which utilize their immense computing powers to benefit mankind.

From the essential and simple desktop to the ultra-sleek portable laptop and designated server machines, there are different types of computing machines used in various ways. Indeed the evolution of computers shows how a once complex and huge machine became a machine for the masses, a necessary part of every household and office. The earlier impression of computers in people's minds was a very smart, capable-of-doing-anything machine, which could churn out data and information in minutes. But such computers are not urban legends. They do exist and are in fact, called supercomputers.

Supercomputers work on the principle of doing large amounts of work in minimum time. They are capable of performing operations in minutes and seconds, that would take a team of even high-end machines, days or weeks or more realistically, months to perform. They are also super in terms of maintenance and need large rooms all to themselves, along with extremely cool temperature surroundings. They consume a lot of power and have a very high processing speed, due to their large number of microprocessors. Supercomputers are used in situations, where a large amount of data needs to be processed in a small time span, with rendering and modeling operations performed simultaneously.

Supercomputers can be used to model or render the working of the nervous system or brain of an organism. In 2006, the Ecole Polytechnique Federale de Lausanne of Switzerland used a supercomputer to render a part of a rat's brain, to understand how neurons transmit and generate messages in this type of organism. However, the computer was only capable of demonstrating the working of a small area of the brain. Nevertheless it was a breakthrough.

In 2009 a joint venture by IBM and Stanford University modeled the cortex of a cat using the Blue Gene/IP supercomputer. They simulated 1% of a human brain's functioning in the same year. Within the next 10 years, a complete rendering and simulation of how the human brain works will be shown by a supercomputer. Why model a brain? To understand how such a body part works, how messages are transmitted, how are memories stored etc. Psychologists will be able to study why some mental conditions occur and which part of the brain is

affected. The human brain is the most used part of the body but very little is known about it and bridging this gap, is a key job of supercomputers.

"As unpredictable as weather", is a common phrase but what if you could predict the weather? Or at least, identify warning signs and premature indicators? Supercomputers once again come to the rescue by rendering models and simulations of climatic conditions as well as arranging numbers and data into useful statistics and graphs. Predicting the changes and fluctuations in weather patterns is possible through supercomputers. Cloud coverage and migration, analysis of the previous season's weather and comparison with the current situation, estimating the intensity and coverage of sunlight on Earth, analyzing the effect of pollutants on the atmosphere and weather and predicting ocean currents and temperature are just a few areas that are explored and examined by supercomputers. The National Oceanic and Atmospheric Administration uses IBM manufactured supercomputers to aid in weather forecasting.

The deadly impact of natural calamities can be estimated and calculated in advance, to minimize damage. To a certain extent, supercomputers can predict the path or route of hurricanes, tornadoes and storms or tsunamis. This helps in carrying out evacuations and strong-holding key resources. Seismic activity detection and calculating the possible paths of seismic waves can help in planning and learning how to handle such calamities.

Supercomputers are used in solving complex equations such as in quantum physics and mechanics. With military aircraft and machinery, supercomputers can simulate aerodynamics at work and model flight patterns to aid in the development of better machinery. Nuclear research needs testing but instead of live detonations, supercomputers can help simulate nuclear explosions and reactions, which help advance the reach of nuclear technology. Proteins are a very important biological component and their molecular structure is 3-dimensional in orientation. One fold or overlap of a molecular strand and the protein's working or function in the body can change. Diseases such as Alzheimer's and cystic fibrosis are linked to such folding of proteins, so understanding the nature of defective proteins and how normal proteins fold, is the key to learning why such diseases occur and how to cure them. Simulation of the folding operation of proteins is a very complex and computation filled task, once again a job for supercomputers. The flow of blood, its path and journey, speed and various difficulties that could occur, can be simulated with rendering done by a supercomputer. This is again of great medical use, as blood functioning in those blood disorders and illnesses can be compared with regular blood functioning to understand the complete spectrum of difference. Supercomputers also aid research and studies in the field of fluid dynamics or deep inside the Earth's core exploration. They can also create complex animated models of molecular structures of various chemical and biological compounds and crystals.

The above-detailed uses of supercomputers demonstrate the usefulness of such machines in crucial tasks as well as aiding in discovery and carrying out research in various fields of knowledge. With each leap and bound taken by man in

the arena of technology, today's supercomputer can easily end up as tomorrow's desktop!

(http://www.buzzle.com/articles/what-are-supercomputers-used-for.html)

III. Read the sentences and say whether they are true or false:

1. Supercomputers are enormous and useless machines.

2. Supercomputers were created to use mankind.

3. Earlier people were considered computers to be dull, capable-of-doing-nothing machines.

4. Supercomputers are power-consuming machines.

5. The use of Supercomputers in biology was a failure.

6. To give the weather forecast is impossible through Supercomputers.

7. There is a slight difference between supercomputers and PCs.

8. Supercomputers are absolutely worthless in medicine.

IV. Answer the questions. Try not to refer to the text:

1. What does evolution of supercomputers show?

2. What are supercomputers?

3. What are supercomputers able to do?

4. Are supercomputers helpful in forecasting?

5. Which sciences can benefit from supercomputers?

V. a) Divide the text into several parts.

b) Find 3-4 key words in every part. Write down the sentences of your own using these words. They should give the main idea of each part.

VI. Make a summary of the text. Use Appendices if necessary.

Optional exercises.

VII. Make the questions to given answers:

1. From the essential and simple desktop to the ultra-sleek portable laptop and designated server machines, there are different types of computing machines used in various ways.

2. But such computers are not urban legends.

3. Supercomputers are capable of performing operations in seconds, that would take a team of even high-end machines, days or weeks or more realistically, months to perform.

4. In 2006 the Ecole Polytechnique Federale de Lausanne of Switzerland used a supercomputer to render a part of a rat's brain, to understand how neurons transmit and generate messages in this type of organism.

5. They can also create complex animated models of molecular structures of various chemical and biological compounds and crystals.

VIII. Match the words in A with their synonyms in B:

A to aid in, to advance, calamity, carry out, detection, estimate, fluctuation, immense, sleek, time span

B assist, disaster, fulfill, improve, instability, period, revealing, smooth, value, vast.

IX. Fill in the gaps with the words given:

computations, core, dimensions, equation, fastest, holds, involved, large-scale, powerful, protecting, provided, requires, service, simulator.

1. One of the most …… supercomputers in Europe is to help the Finnish Meteorological Institute (FMI) become the first in the world to run a …… space simulator.

2. In order to develop this ……, the powerful computer, named Hermit, a Cray XE6 type, has been …… by the Partnership for Advanced Computing in Europe (PRACE).

3. It …… number 12 on the renowned TOP 500 lists of the world's …… supercomputers, and in the ranking of industrially used supercomputers, Hermit is number one worldwide.

4. PRACE (the Partnership for Advanced Computing in Europe) which is a high-performance computing (HPC) …… for scientists and researchers from academia and industry, has awarded 30 million …… hours of computing time to the Institute for their Vlasiator space simulator.

5. These designated hours will be used for the Institutes' latest space simulation, Vlasiator, which is designed for modeling near space, and …… the most computing time.

6. Installed in Germany, the supercomputer has 113,664 cores and performs over 1 million billion ……. per second.

7. Simulation models are used in various ways: to study processes …… in the origin of auroras and for predicting space weather, which can help in …… satellites against harmful particle showers.

8. Vlasiator is the world's first simulation based on the Vlasov ……. that can create a model of the Earth's entire magnetic field in three …… , while at the same time creating particle distributions in six dimensions.

X. Choose one of the topics and make a presentation:

 1. Supercomputers for space applications.

2. History of Supercomputers.

3. Supercomputers in oil and gas exploration.

4. Supercomputer architecture.

Unit 10
The Harmful Influence of the Computer

I. Before you read the text answer the following questions:

Who uses computers today?
Give examples of the impact they have on our lives.
How has the world benefited from the invention of the PC?

II. Read the text to check your answers.

One of the bad aspects of computer use is that even the children who cannot read and write yet, are already used to this machine. They develop at a very early age the habit of playing on the computers for hours on end. According to the latest researches, computers do not improve our health and that they can seriously damage our system when they are not properly used. There certainly is a quite sharp competition in the computer world. Due to this aspect, several different opinions have been developed on this topic. Manufacturers assert that computers are absolutely harmless. At that time protection remedies producers had different opinions.

The work done by a computer operator is generally quite exhausting and intensive, regardless of the country. For instance, Germans include this type of work among the 40 most health damaging jobs. It is considered that working on the computer should not exceed 50% of the working period. While we work at the monitor, we need to read, type, analyze something, correct mistakes, and perhaps do all that more than once. Yet in exchange, the eyes have to try adjusting to all that pressure, and for this reason, we may assert that the computer really does have a negative impact on our eyesight.

Even the celebrated multi-millionaire Microsoft manager, Bill Gates, has severely deteriorated his eyesight because of the computer use. People for whom computer work is their bread and butter have the most health complaints because

of muscle and joint diseases. This might be restricted to neck torpor, pain in the shoulders and in the loins, etc. However, there can be more grievous problems which refer to the damage of arm nerves due to the excessive time spent working on the computer.

All this bad effect of the computer on our eyes can be found under the name of CVS (Computer Vision Syndrome), which includes dryness of the eyes, eyestrain, backache, neck ache, wrest ache, reduced acuity of vision, distress, reduced capacity of concentration, and so on.

Those who need to spend a lot of time in front of a computer, encounter two main problems: the excess of information and the electromagnetic fields.

Firstly, we might try to see what that excess, that overload of information refers to. Whereas our heart spends energy for blood circulation, and while our lungs need energy for the breathing process, when it comes to our brain, it requires energy for managing pieces of information. Some scientists consider that the human brain uses 1,200 Kcal every day. Thus, the problem occurs when our brain needs to take away the energy resources from other organs, in order to supplement for the energy lapse it has to face. Because of that, specialists like computer programmers and engineers are often under a high level of mental pressure, which may lead to anxiety, lack in energy, emotional instability, inefficiency in completing the required work.

Another damage brought about by computer work is the unavoidable exposure to the so-called electromagnetic fields. Contrary to some people's opinion, they do affect the biological processes of our body, which can be even more sensitive to weak electromagnetic fields than to strong electromagnetic fields.

Of course, we may find several solutions to avoid or prevent these bad influences of working on the computer. For instance, we could start with an easier project and leave the difficult one until later, when we feel more able to do it. If not, we might simply turn to simple activities, in order to turn our attention from the disturbing aspects of information overload.

(http://www.buzzle.com/articles/harmful-influence-of-the-computer.html)

III. Answer the following questions.

1. Where can you find computers nowadays?

2. Who supports the opinion that computers are harmless?

3. What kind of work do people usually do on a computer?

4. How does computer affect our eyesight?

5. What can be done to avoid bad influences of a computer?

IV. Say whether these sentences are true or false. Try not to refer to the text.

1. Computers are not accessible for children.

2. Working on a computer is quite useful for your health.

3. There are only a few harmful effects of a computer on our health.

4. You can't find any solutions to avoid the bad influence of computers.

V. a) Divide the text into several parts.

　b) Find key words for every part.

　c) Write down the main idea of each part in one sentence.

VI. Make a summary of the text. Use Appendices if necessary.

Optional exercises.

VII. Form the derivatives to the following words. Check with your teacher or a dictionary.

e.g. to calculate- calculating, calculator, calculation.

1) avoid, 2) compete, 3) complain, 4) harm, 5) protect, 6) compute, 7) operate

VIII. Fill in the gaps with the words given:

addiction, affecting, cause, earn, happening, lifestyle, risk, spends, vision, withdraws.

1. Some children who frequently use the computer may be at ……for developing …… problems.

2. Computer …… has resulted in changing our …… and social value.

3. For those who …… by working on the computer have the greatest part of health issues …… their muscles and joints.

4. The user ……. from friends and family as he …… more and more time on the computer.

5. Constant computer gaming can ……someone to place more emotional value on events within the game than things …… in their real lives.

IX. Explain the meaning of the following words. Check with a dictionary if necessary:

1) damaging job, 2) entire country, 3) improve someone's health, 4) working period, 5) deteriorate, 6) bread and butter, 7) grievous problem, 8) lack of energy.

X. Using additional sources prepare a report about positive and negative effects of the computer.

Part II. The Internet in Daily Use

Unit 1
The Internet and its Uses in Our Daily Life

Before you read:

I. Match English word-combinations from the text and Russian equivalents:

1. to be sidelined	a. коммуникационное программное обеспечение
2. to acquire a habit	b. средство развлечения
3. to access the Internet	c. продвигать, способствовать продаже товара
4. plethora of	d. технические средства, возможности
5. communication software	e. загружать (в компьютер)
6. facilities	f. обновлять, корректировать
7. to facilitate	g. заявление о приеме на работу
8. to download	h. оставаться в стороне, не уделять внимания
9. social networking	i. получать доступ в Интернет
10. privacy intrusion	j. способствовать, давать возможность
11. apart from	k. приобретать привычку
12. to update	l. помимо, кроме
13. to promote	m. средство коммуникации
14. job application	n. изобилие, огромное количество
15. means of entertainment	o. вторжение в личную жизнь
16. a tool for communication	p. социальные сети

II. Answer the following questions:

How long can you live without the Internet?

How would our life change without the Internet?

Can you make up the list of uses the Internet in your daily life?

III. Read the text and compare your answers with the information in the text.

The impact of the Internet on our life is obvious and cannot be sidelined. It is used in almost each and every domain of business. The popular uses have been discussed in detail in the following article.

How difficult our life would have been if there was no Internet. Just think about it. To find some information, we all have acquired the habit of 'Googling' it on the web; within a few seconds the screen displays the desired information. You want to book tickets for a movie night with friends, and you can book them at the click of a button. Many of us cannot imagine our life without social networking sites. The Internet has indeed made the world a small place and living life easier. And the rapid progress of technology has made it possible to access the Internet from anywhere. It has such a plethora of uses that we cannot help using it every day for one purpose or another.

For Information:

For a layman, it is nothing but a collection of websites. And there are innumerable **websites** that serve a variety of purposes. There are news websites, social networking websites, websites that provide information and websites of various businesses and organizations. These websites are updated frequently to provide information to the user. You can find everything of anything on the web just by browsing through a few websites. You can also use emails, **blogs,** IM chat, social networking websites and communication **software** for sharing your information with the world. It has made access to information cheaper and easier and this is its most common use.

Business & Advertising:

Almost all businesses these days have websites, through which they promote and advertise themselves. This medium these days has been used extensively for promotional campaigns. Not only promoting your business but you can also effectively advertise your event or any cause on this medium. There are many businesses that depend on the Internet for their survival like stocks and call centers, to name a few. It has promoted faster access to necessary information which strengthens business processes.

Education:

It also is a popular medium used by students. Many students use it for educational purposes, like for finding study material or for applying to some college or university. It is now a virtual world and all the applications are done online through the website of the concerned educational body. Students use websites for these and many other purposes like checking exam results, exam schedule, application procedure to any course, etc. Students also take the help of the Internet for project help and for obtaining the required images. Everything is a click away from us.

Communication & Networking:

The use of the Internet for networking is very popular among all age groups. There are many good **social networking** websites that are used by people for communication. These websites provide an effective and easy platform that facilitates interaction. It is widely used as a means of communication through means like networking websites, chat websites, blogs, etc. Through these websites you can also share your photographs with your near and dear ones. It is widely used by job seekers for job applications and job searching. Facilities like video conferencing have made it possible to conduct interviews online.

Entertainment:

Another popular use of the Internet is for entertainment. Facilities like listening to online music, downloading music and movies provide a platform for entertainment. There are plenty of other ways through which you can entertain yourselves. You can play online games, view sports matches, or watch videos of your choice. It is a trusted means of entertainment for these kinds of purposes and is extensively used for the same.

Other Popular Uses:

It is popularly used for banking. Almost all the banking transactions are possible through this medium. Apart from these common uses, it can also be used for shopping. Online shopping is very popular among masses and on the Internet you can buy anything and get it delivered at home. There are also many people who use it to work from home.

These were some of the chief common uses. The Internet has made our life easy by facilitating so many uses. But it is also prone to attacks of many kinds that threaten safety. To avoid these attacks we should all use it carefully and also protect ourselves from various privacy intrusions. Its use as a tool for communication will always remain its most powerful side. The range of uses of the Internet is vast and with the progress of technology new uses will get added to the list of uses continuously.

http://www.buzzle.com/articles/internet-and-its-uses-in-our-daily-life.html

IV. Fill in the gaps with the words and word-combinations from the text:

1. To find some information, we all have …the habit of … it on the web.

2. The rapid progress of technology has made it possible to … the Internet from anywhere.

3. These websites are … frequently to provide new information to the user.

4. It has made access to information cheaper and easier and this is its most … … .

5. Most businesses nowadays have websites, through which they … and … themselves.

6. Many students use the Internet for … purposes.

7. All … are done online through the website of the concerned educational body.

8. There are many good … … websites that are used by people for communication.

9. The Internet has a lot of … provide a platform for entertainment.

10. We need to protect ourselves from various … intrusions.

V. Match the words from both columns keeping in mind phrases from the text.

1. to update	a. photographs
2. to display	b. one's business
3. to access	c. a website
4. to promote	d. an interview
5. to conduct	e. music
6. to share	f. information
7. to entertain	g. oneself
8. to download	h. the Internet

VI. Give English definitions for the following terms. Check with the Glossary if necessary.

      1) website; 2) social networking; 3) blog; 4) communication software;

VII. Match the first half of each sentence with the most appropriate second half

1.The impact of the Internet on our life	a. has made it possible to access the Internet from anywhere.
2. To find some information,	b. websites for promotion their goods and services.
3. The rapid progress of technology	c. checking exam results, exam schedules and so on.
4. Many of us cannot imagine our life	d. we all have acquired the habit of "Googling" .
5. Almost all businesses these days have	e. can also be used for shopping .
6. Students use websites for	f. cannot be sidelined .
7. Apart from these common uses, the Internet	g. without social networking sites.

VIII. Answer the following questions:

1. What kind of habit have most people acquired when they need to find some information?

2. What has made it possible to access the Internet from anywhere?

3. Why do most businesses nowadays have their own websites?

4. What does the Internet enables students to do?

5. What kind of websites do people use for communication?

6. What facilities have made it possible to conduct interviews online?

7. Can you list 5 ways through which you can entertain yourselves in the Internet?

8. How can the Internet be used for shopping?

9. Why should we be careful when using the Internet?

10. What should users do to protect themselves from privacy intrusion?

11. What is the most powerful side of the Internet?

IX. Translate sentences from Russian into English:

1. Мы не можем представить себе жизнь без Интернета и его огромных возможностей.

2. Для простого обывателя Интернет является всего лишь набором веб-сайтов.

3. Вы можете заказать билеты по Интернету, всего лишь один раз кликнув мышью.

4. Студенты заходят на веб-сайты, чтобы узнать расписание, результаты экзаменов, записаться в группу для изучения какой-либо дисциплины и т.д.

5. Такие возможности, как режим видеоконференции, позволяют проводить интервью в онлайне.

6. Практически все компании в наше время имеют свои сайты для рекламы и продвижения бизнеса.

7.Существует множество популярных социальных сетей, которые используются для общения людьми разного возраста.

8. Интернет предоставляет огромные возможности для развлечения.

9. В Интернете вы можете купить практически все, не выходя из дома, и вам доставят покупку на дом.

10. Диапазон использования возможностей Интернета огромен, но нужно пользоваться им осторожно, чтобы защитить себя от вторжения в личную жизнь.

X. Using Appendices 1 and 2, make a short summary of the text.

Unit 2
Who Invented the Internet?

Before you read:

I. Match the Engish terms from the text with their Russian equivalents

1. circuit switching	a. маршрутизатор
2. cloud computing	b. пакетная коммутация
3. relay node	c. режим разделения времени
4. packet switching	d. сопряженный процессор обработки сообщений
5. time-sharing	e. сеть с коммутацией пакетов
6. network node	f. коммутация каналов
7. Interface Message Processor	g. вычисления при помощи Интернет-ресурсов
8. gateway	h. центральный компьютер узла вычислительной сети
9. router	i. шлюз
10. packet switched network	j. сетевой узел
11. host	k. транзитный узел

II. Answer the following questions:

What do you know about the invention of the Internet?

Can you name any people who could be called the pioneers of the Internet?

What does WAN and ARPANET stand for?

III. Read the text and compare your answers with the information in the text.

Who was the genius who came up with the thought that enabled the world to get information within the blink of an eye? The following article will cover some information on invention of the Internet.

The Internet has become a crucial part of the modern lifestyle that helps us find information, understand concepts, share our thoughts and stay connected with everyone else on the earth. However, the prestigious title of the 'inventor of the Internet technology' cannot be given to a single person or organization. It is the symphony of many minds that has helped in the creation of this model of self-regulated functioning, that can be easily called as the biggest democracy in the world.

Many people erroneously believe that the Internet is the same as the **World Wide Web (WWW)**. The Internet is a huge network of computers including servers connected by cables across the world whereas the WWW is the collection of all the websites available on the Internet. The credit for the invention of the Web goes to Tim Berners-Lee who created it as recently as 1990. To know about the invention of the Internet we might have to delve a little further.

The First Step. The first person who thought of the idea to transfer information between different systems was Leonard Kleinrock. His first paper titled 'Information Flow in Large Communication Nets' was published on May 31, 1961. He replaced the old circuit switching process with a new concept that involved transmission of data via packets.

The Idea of a Network. The Soviet Union had launched the first satellite, Sputnik I, that prompted the US President Dwight Eisenhower to create the ARPA (Advanced Research Projects Agency) to stay in the lead in the arms race. J.C.R. Licklider was appointed as the head of the new IPTO (Information Processing Technology Office) organization in 1962. He applied his vision of a 'Intergalactic Computer Network' which outlined most of what Internet today is, including concepts like **cloud computing**. His contribution is, however, mainly in terms of ideas.

Other Pioneers. In the collective report "On Distributed Communications", published by RAND in 1964, Paul Baran came up with a new design that challenged the entire telephony design by introducing a new communication system. He thought of a distributed relay node architecture that did not use high frequency signals. An added advantage was that there was no need to bother about inactivation in case of a nuclear attack for such a system. This was going to be very practicable during the Cold War.

The term "packet switching" for this mode of data transfer was first used by Donald Davies in 1965. Before that, Baran referred to the data packets as "message blocks". Data transmission thus became more flexible with each packet having information about its own destination and a predestined route was no longer required. Davies' concepts on the topic were put forth during a conference in Edinburgh on 5 August 1968.

The First WAN. In October 1965, Thomas Marill and Lawrence Roberts set up the first WAN (Wide Area Network). They described it in 'Toward a Cooperative Network of Time-Shared Computers' the very next year.

The ARPANET. Licklider lacked experience in computer programming. So, he appointed Lawrence Roberts to help him create the network for ARPA. In 1967, Lawrence led a team that created the **ARPANET** (Advanced Research Projects Agency Network). He was the first scientist to use the full potential of the new circuit created by Kleinrock. Thus the precursor was created that led to the development of Internet. The original purpose was to facilitate time-sharing so that institutions could utilize the processing power and resources of each other. Even today, Internet uses **packet switching** as the primary method for transferring data.

The First Network Switch. Based on the works of Ehud Shapiro, Paul Baran, Thomas Marill and many others, the final specifications of the first network node called 'IMP' (Interface Message Processor) were created by Lawrence Roberts and Barry Wessler. Soon, Bolt Beranek and Newman, Inc. got a contract to design and build the IMP sub network. Today, we use advanced forms of such **gateways**, which are called **routers.**

The First Data Transfer. The IMP was sent to UCLA on August 29, 1969. A few days later, on September 2, 1969, the second such equipment was installed at SRI. The first Internet message was directed from Kleinrock's laboratory to the University of California on October 29, 1969. It was Charley S. Kline who sent across the message 'LO' which was an attempt at the word 'LOGIN'.

The First Operational Packet Switching Network: Development of the ARPANET. In 1970, Davies helped build a packet switched network called the Mark I, which was soon replaced by Mark II. This continued to provide service during many research operations in Europe. Larry Roberts worked on the idea and got it infused into the ARPANET. Before this, all computers that shared information had to have identical systems, which was a major disadvantage in communicating networks. In 1971, ARPANET had a total of 15 sites and 23 **host**s. Project Gutenberg was started that year as well. By 1974, 62 computers were connected through the ARPANET, making people claim it as a primitive ISP (**Internet Service Provider**).

The First ISP. In 1990, Massachusetts-based 'The World' became the first commercial ISP (Internet service provider). PSINet is also one of the groundbreakers.

The Internet is the contribution of many experts from various fields who helped in creating it. The Internet and the world will forever remain obliged to all the known and unknown people who contributed in making knowledge-sharing so easy.
http://www.buzzle.com/articles/who-invented-the-internet.html

IV. Translate from English into Russian:

1) within the blink of an eye; 2) to contribute (in); 3) erroneously; 4) credit for smth.; 5) to delve; 6) to launch a satellite; 7) to stay in the lead (of); 8) the arms race; 9) to challenge; 10) to put forth; 11) to lack experience; 12) precursor; 13) to get it infused; 14) groundbreaker; 15) to be obliged;

V. Close the text and tell whether the following sentences are true or false, correct the false statements:

1. The Internet is this wonderful creation that has made the world around us still more enormous.
2. The title of the 'inventor of the Internet technology' cannot be given to a single person or organization.
3. The Internet is the same as the World Wide Web (WWW).
4. The credit for the invention of the Web goes to Leonard Kleinrock.
5. The article 'Information Flow in Large Communication Nets' was published as early as 1861.
6. Launching the first sputnik had a great impact on creating the first American computer network.
7. The terms "cloud computing" and "packet switching' were first used by Donald Davies in 1965.
8. Thomas Marill and Lawrence Roberts set up the first WAN in 1965 and published the description of it in 1966.
9. Even today, Internet uses circuit switching as the primary method for transferring data.
10. The final specifications of the first network node called 'IMP' (Interface Message Processor) were created by Charley S. Kline.
11. ARPANET was the precursor of the modern Internet.
12. The world must be obliged only to Americans who created the Internet.

VI. Match the words in two columns so that they should form terms from the text.

1. transmission of data	a. network
2. cloud	b. Provider
3. Wide Area	c. time-sharing
4. to facilitate	d. a satellite
5. Internet Service	e. relay node architecture
6. packet switched	f. via packets
7. to launch	g. Network
8. a distributed	h. computing

VII. Give English definitions for the following terms. Check with the Glossary if necessary.

1) cloud computing; 2) packet switching; 3) router; 4) gateway; 5) host; 6) ISP;

VIII. Match the first half of each sentence with the most appropriate second half

1.The credit for the invention of the Web	a. a distributed relay node architecture that did not use high frequency signals.
2. It was Leonard Kleinrock who	b. sent across the message 'LO' which was an attempt at the word 'LOGIN'.
3. Paul Baran thought of	c. first used by Donald Davies in 1965.
4. J.C.R. Licklider outlined most	d. that created the ARPANET.
5. The term "packet switching" was	e. thought of the idea to transfer information between different systems.
6. In 1967, Lawrence Roberts led a team	f. goes to Tim Berners-Lee.
7. It was Charley S. Kline who	g. features of the Internet, including concepts like cloud computing .

IX. Answer the following questions:

1. Why do you think the Internet is called as the biggest democracy in the world?

2. What can you explain the difference between the Internet and the World Wide Web?

3. Who is considered to be the inventor of the World Wide Web?

4. Who first thought of the idea to transfer information between different systems?

5. What was the event that prompted the US President Dwight Eisenhower to create the ARPA?

6. What was the important advantage of distributed relay node architecture that did not use high frequency signals?

7. When did Donald Davies put forth his concepts on packet switching?

8. When was the first WAN set up? And who was it created by?

9. Who was the first scientist to use the full potential of the new circuit created by Kleinrock?

10. How was the first network node called?

11. Where was the first Internet message directed from Kleinrock's laboratory to?

12. How many host computers and sites did ARPANET have in 1971?

13. What were the names of the first commercial Internet service providers?

X. Translate sentences from Russian into English:

1. Звание изобретателя Интернета невозможно присудить отдельному человеку или организации.

2. Многие ошибочно полагают, что Интернет – это то же самое, что Всемирная паутина.

3. Заслуга создания Всемирной Паутины принадлежит Тиму Бернерсу-Ли.

4. Л. Клейнрок в 1961 г. изобрел новый способ передачи данных, называемый пакетной коммутацией.

5. Джозеф Ликлайдер внес огромный теоретический вклад в возникновение Интернета.

6. Пол Баран занимался развитием коммуникационных сетей, которые могли бы выстоять во время ядерной атаки.

7. В 1965 г. в Массачусетском Технологическом Институте Лоуренс Робертс создал первую компьютерную сеть, используя пакетный способ передачи данных.

8. В 1967г. команда ученых под руководством Л.Робертса создала ARPANET, предшественник Интернета.

9. Первое Интернет-сообщение было отправлено из лаборатории Л. Клейнрока в Калифорнийский книверситет в 1969г.

10. В 1970г. Дональд Дэвис создал сеть с коммутацией пакетов под названием Марк I, которую вскоре сменил Марк II.

11. Мир всегда будет обязан тем известным и неизвестным специалистам, которые внесли свой вклад в создание Интернета.

XI. Using the information from the text and your own information, prepare a 10-min. presentation on one of the inventors of the Internet.

Unit 3
How Does the Internet Work?

Before you read:

I. Study English terms from the text and their Russian equivalents:

1. **Application Layer Protocol**	протокол прикладного уровня
2. **hypertext transfer protocol (HTTP)**	протокол передачи гипертекста
3. file transfer protocol (FTP)	протокол передачи файлов (программа передачи данных между 2-мя хост компьютерами)
4. **Transmission Control Protocol (TCP)**	протокол управления передачей данных
5. Internet Protocol address (IP address)	32-битовый адрес протокола Интернет, включающий в себя номер узла и сети
6. **Wireless Application Protocol (WAP)**	протокол беспроводного доступа (протокол для беспроводных устройств)
7. **General Packet Radio Service (GPRS)**	система пакетной радиосвязи общего пользования
8. **Code Division Multiple Access (CDMA)**	множественный доступ с кодовым разделением каналов

II. Answer the following question:

1) Do you know anything about the way the Internet operates?

2) Can you explain what protocol is?

3) How many layers does the process of data transmission involve?

III. Read the text and compare your answers with the information in the text.

The work of the Internet is based on a series of protocols. A **protocol** is a set of rules or a kind of agreement that two parties agree to abide. In this case, these rules govern the transmission and reception of data, to and from a computer from a party and situated at some unknown location.

To understand the way Internet protocols works, it is important to understand the protocol layers. The network is firstly divided into various layers and protocols that are set for each of these layers. Let us see which protocols correspond to which layers:

Application Layer Protocol
The application layer acts as the interface between the user and the system. This layer has application specific protocols like hypertext transfer protocol (**HTTP**), e-mail, chatting, or file transfer protocol (FTP) for downloading, etc., which communicates with the subsequent TCP layer.

**Transmission Control Protocol (TCP) Layer**
Every application requiring network access communicates with the TCP layer first. This protocol has a set of rules that govern the functioning of the transmission layer, which is between the application layer and the IP layer. While receiving data, TCP directs data to a specific application using the port number.

Internet Protocol Layer
The main job of this layer and the protocols associated with it is to give the machine an identification on the network. Every computer on the Internet or a local network gets assigned a unique address commonly known as Internet Protocol address or simply the **IP address**. It is a number of the form xxx.xxx.xxx.xxx, where xxx must be any combination from 000 to 255.

Hardware Layer
This is the layer which physically connects a computer to the data transmission media which may be a phone line, a cellular or a satellite connection. This layer includes modems, ethernet cards and hardware lines which materialize the actual connection process. The protocol governing this layer converts computer readable digital binary data into transmittable analog data (this is not needed, in case an ethernet line is used).
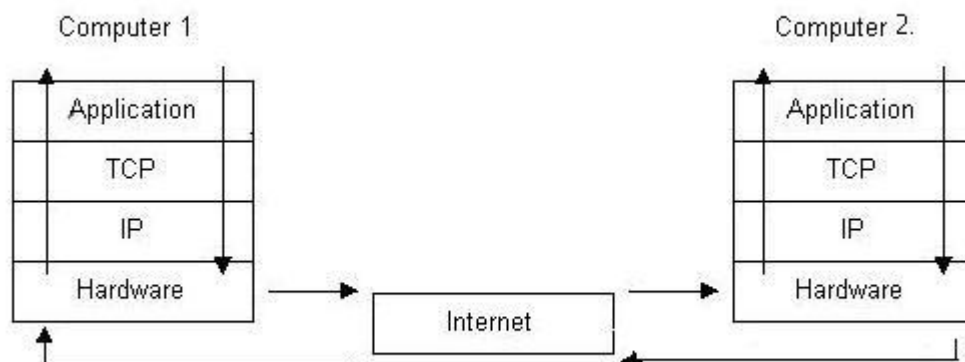
Layer diagram depicting the data flow

To demonstrate how data flow occurs through these layers when using the Internet, let us consider the case of two computers, where computer 1 is trying to access

some data on computer 2. Let's say that user1 and user2, are the respective users. User 1 is using an application, suppose some browser. Thus, he directly communicates with the application layer only. His actions are relayed through by application layer to the TCP layer. The TCP layer communicates with the IP layer and the IP layer, then corresponds to the hardware. All this while, the respective protocols take care that these layers function the proper way. Now, the data or the request from user1 is sent to computer 2, via the Internet framework. This is when the importance of protocol is evident. All protocols on the receiver's end function for the opposite cause. Actually, **OSI model** (Open System Interconnection Model) is composed of seven layers, each of which performs certain functions. But our task was to give a general idea of the way the Internet works. We better not go too deep into the working of protocols, as that is not what we are looking for.

Till now, we were concentrating a lot on the Internet in the wired world. But, with technologies like Wi-Fi and WiMax giving the cable a run for its money, it's time to throw some light on wireless Internet.

The Work of Wireless Internet

Before answering this question, let us find out about the type of **wireless Internet connections.** They are of two types: a wireless connection using a **router**, more commonly known as Wi-Fi, and the Internet accessed through a mobile phone network. Now, let's consider the working of wireless Internet, via Wi-Fi and on mobile.

Wi-Fi

A Wi-Fi capability is achieved by simply making your normal wired connection wire-free. This is done with the help of a router. A router, as the name suggests, is simply a re-routing device. It is equipped with a low-power radio transmitter and receiver, with a range of about 300 ft. It is connected to the normal wired media like a phone line, satellite TV line or the ethernet cables. The router converts the received electrical signals into radio signals capable of being transmitted through the air. While sending the data on the Internet, it does the exact opposite, i.e converting radio signals into electrical signals. For Wi-Fi compatibility, you need to have computers equipped with wireless cards, which is nothing but a radio transmitter and receiver. As a router creates a Wi-Fi hotspot of about 300m radius, Internet can be accessed in those hotspot areas only.

Mobile Internet

If you own a relatively new mobile handset, then it's most likely to be equipped with a built-in web browser. Mobile phones with internet capabilities are based on a system called WAP (Wireless Application Protocols). Those areas, where GSM (Global System for Mobile) phones are in use, General Packet Radio Service (GPRS) is available to the users to access the Internet in 2G and 3G systems. A 2G system offering GPRS service is often called 2.5G. A typical 2G GPRS system provides a speed of 56-128 kbps. This system works on converting data packets into radio packets using an in-built WAP modem. This method of data

transmission is known as packet switching. Packet switching is more beneficial, as compared to circuit switching used in voice transmission over cellular networks. Here, the cell phone connects to the same wireless connection used to make calls, but instead of getting re-routed to another cell phone, it connects to a web server. Web content from this web server is downloaded to your Internet phone and the modem demodulates the data to be viewed by the browser.

The Internet on CDMA (Code Division Multiple Access) phones uses a similar mechanism over a different technology. It has a much faster speed, as compared with the GSM-based Internet services.

WAP-based Internet on mobile phones has been slow to take off, mainly because of the numerous disadvantages associated with Internet on mobile phones, like small screen size, lack of windows, lack of ease of navigation and speed. In Japan, newer and faster cellular networks are using a technology called i-mode to access the net from a cell phone.
http://www.buzzle.com/articles/how-does-the-internet-work.html

III. Translate from English into Russian:

1) to occur to smb.; 2) data transmission; 3) application; 4) subsequent; 5) to direct data; 6) to get assigned; 7) data transmission media; 8) hardware: 9) binary data; 10) data flow; 11) to give someone a run for their money; 12) wireless connection; 13) transmitter; 14) receiver; 15) compatibility; 16) hotspot area; 17) built-in browser; 18) to demodulate data; 19) to take off; 20) cellular networks;

IV. Fill in the gaps with words and word-combinations from the text:

1. A protocol is a … of rules or a kind of … that two parties agree to abide.
2. The … layer acts as the … between the user and the system.
3. While receiving data, TCP directs …to a specific … using the port number.
4. Every computer in the Internet is assigned a unique … known as Internet … address .
5. Hardware layer … connects a computer to the data transmission … .
6. The protocol governing hardware layer converts computer digital …data into transmittable … data.
7. A router is equipped with a low-power radio … and …, with a range of about 300 ft.
8. For Wi-Fi …, you need to have computers equipped with wireless cards

9. If your mobile phone is up-to-date, then it's most likely to be equipped with a … web browser.

10. The Internet on CDMA phones is faster compared with …-based Internet services.

VI. Match the words in two columns so that they should form word-combinations from the text.

1. the interface	a. IP-address
2. to direct data	b. of about 300m radius
3. to assign a unique	c. web browser
4. to convert readable digital binary data	d. connection
5. to create a Wi-Fi hotspot	e. to a special application
6. a built-in	f. radio transmitter
7. wireless	g. capabilities
8. a low-power	h. between the user and the system
9. mobile phones with internet	i. into transmittable analog data

VII. Give English definitions for the following terms. Check with the Glossary if necessary.

2) protocol; 2) HTTP; 3) IP-address; 4) router; 5) wireless networking;

VIII. Match the first half of each sentence with the most appropriate second half

1. The work of the Internet is	a. the application layer and the IP layer.
2. The network is divided into	b. a computer to the data transmission media
3. The application layer acts	c. simply making your normal wired connection wire-free.
4. The transmission layer is between	d. various layers and protocols that are set for each of these layers.
5. Hardware layer physically connects	e. based on a system called WAP.
6. A Wi-Fi capability is achieved by	f. as the interface between the user and the system.
7. Mobile phones with internet capabilities are	g. based on a series of protocols. .

IX. Answer the following questions:

1. What is the work of the Internet is based on?

2. Can you list the layers (according to the text) and corresponding protocols?

3. What is the function of the application layer?

4. What is the name for set of rules that govern the functioning of the transmission layer?

5. What is the main job of the Internet Protocol layer?

6. What devices does hardware layer include?

7. How is data converted on the hardware level?

8. What are the two types of the wireless Internet connections?

9. How is Wi-Fi capability achieved by?

10. What kind of signals does the router convert received electrical signals into?

11. What is the radius of the Wi-Fi hotspot?

12. How do we call the system which mobile phones with internet capabilities are based on?

13. Which mobile Internet is faster – WAP-based or CDMA-based?

X. Translate sentences from Russian into English:

1. Интернет протоколы – это набор правил, регулирующих передачу и прием данных между компьютерами.

2. Прикладной уровень – самый верхний, в его задачи входит организовать взаимодействие между пользователем и системой.

3. Протоколы передачи данных были изобретены одними из первых. Первоначально они использовались для связи аппаратуры разных производителей.

4. Каждому компьютеру в Интернете присваивается уникальный IP-адрес.

5. На уровне аппаратного обеспечения компьютер физически соединяется со средством передачи данных, например телефонной линией.

6. На данном уровне цифровые данные с первого компьютера преобразуются в аналоговые данные, которые передаются на другой компьютер.

7. Существует два вида беспроводных Интернет-соединений.

8. Роутер преобразует получаемые электрические сигналы в радиосигналы, которые можно передавать по воздуху.

9. Если у Вас современная модель телефона, то скорее всего Ваш телефон оснащен встроенным браузером.

10. Мобильный Интернет может быть основан на системах GSM и CDMA, которые используют похожий механизм, но различные технологии.

XI. Using Appendices 1 and 2, make a short summary of the first part of the text.

Unit 4
Intranet Vs. Internet

Before you read:

I. Match the following Internet terms with their definitions:

1. a hyperlink	a. a device used to transmit data between two computers or networks
2. a web server	b. a person who is addicted to watching videos on the Internet
3. a netizen	c. a reference in a document to another section of the document or to another document which is used to redirect the user from one section of a page content to another.
4. a router	d. a set of rules which determine the formats by which information may be exchanged between different systems
5. a protocol	e. a computer program that accepts HTTP requests from web clients and provides them with HTTP responses
6. peer-to-peer data sharing	f. a form of networking which eliminates the need for central servers, allowing all computers to communicate and share resources (music, videos, etc) as equals
7. a network	g. a person who spends all his/her time in the Internet
8. a youtuber	h. a system of computers interconnected so that information and resources can be shared by a large number of users

II. Answer the following questions:

1) Have you ever heard the term "intranet"?
2) Can you explain the meaning of it in a short way?
3) What is the difference between the Internet and an intranet?
4) What do you think of the word "netizen"?
   Which two words was it formed from?

III. Read the text and compare your answers with the information in the text.

If you are curious about how different an **intranet** is from the Internet, this article will be illuminating. If all computer networks are arranged in an ascending order of complexity and scaling, two types of networks will lie at extreme ends.
Definition

Intranet is an internal private computer network or connection of one or more computer networks, whose use and access is restricted to an organization and its employees or members. In industries, based on the information technology, intranets are absolutely necessary, as their work involves a high degree of data sharing and collaboration among computer users. Such an intranet, mostly operates through a website, run by a local server, acting as a resource sharing medium. You could call it a scaled-down private Internet. Transfer of data over such a private website based network may be controlled using the Internet protocols like HTTP (Hyper Text Transfer Protocol), SMTP (Simple Mail Transfer Protocol) and FTP (File Transfer Protocol). However, not all intranets use private websites. There may be organizations where intranets are meant for pure file sharing, with no private website or Internet protocol use required.

The very fact that you are accessing information through the Internet, demonstrates that you already have an idea about what the Internet or 'International Network' can do for you. Take small networks spread in a small region of your city, then integrate them with other such small networks to form local area networks (LANs). Then integrate all such local area networks to form a wide area network of computers. Next, integrate such wide area networks (WANs) into a national network. Subsequently, join all such national networks together. What you ultimately end up with, is the Internet!

Structure, Scale & Complexity
The structure of an intranet is similar in principle to the Internet. Both use a server-client structure and both networks transfer data using Internet protocols. However, they fundamentally differ in networking scale and complexity. With billions of computers sharing and transferring data amongst each other, the administration of the Internet is far more complex. A large amount of networking and routing hardware is needed to connect all the computers worldwide. On the other hand, an intranet, being restricted to a few computers is easier to manage.

Server Control
One of the most fundamental points of difference is server control. An intranet is controlled by a single **server**, which can adequately handle all tasks.
The Internet is operated by a linked set of billions of computer servers worldwide. This is due to the sheer size of data that's exchanged over the Internet, making it inevitable, that control centers be decentralized. It is like the difference between the governing of a city and governing a nation.

Uses
The Internet and the intranet differ in their uses. An intranet is built in an organization, to enable resource sharing between corporate users. Corporate intranets have restricted access by user ids and passwords, which are not accessible

to anybody on the outside. Intranets provide a limited set of services, which are required by the organization.

The Internet is a global network which has information sharing on a global level as its goal. One of the major points of differentiation is the range of services offered. Internet offers all possible spectrum of services to its users, compared to the very restricted number of services offered by Intranets. From cloud computing, e-mail, FTP, world wide web, peer-to-peer data sharing to VIP services and more, Internet caters to every global **netizen's** needs.

To conclude with, the difference between the Internet and an Intranet is primarily the scaling, complexity and manageability, while the fundamental principles and technologies of both networks remain the same.

http://www.buzzle.com/articles/intranet-vs-internet.html

IV. Translate from Engish into Russian:

1) illuminating; 2) ascending order; 3) to enable; 4) sophisticated; 5) to be restricted; 6) resource sharing medium; 7) to be meant for; 8) The very fact that…; 9) subsequently; 10) ultimately; 11) vast difference; 12) to be restricted; 13) server cluster; 14) sheer ; 15) inevitable; 16) essential; 17) to enable resource sharing; 18) accessible; 19) the range of services; 20) peer-to-peer data sharing; 21) netizen; 22) manageability; 23) to cater (to);

V. Find derivatives from the text to the following words:

1. to compare →	*noun*
2. complex →	*noun*
3. architect →	*noun*
4. privacy →	*adjective*
5. integrity →	*verb*
6. subsequent →	*adverb*
7. different →	*noun*
8. to access →	*adjective*
9. net →	*2 nouns*
10. to manage →	*noun*

VI. Close the text and fill in the gaps to complete the sentences:

1. If all computer networks are arranged in an ascending order of … and …, two types of networks will lie at extreme ends.

2. An intranet usually is an … private computer network, and its use and access is … to an organization and its employees or members.

3. However, intranets are not always private, sometimes they are … for pure file sharing, with no private website or Internet … use required.

4. The Internet is a network that connects computers all over the world using Internet protocols, which make information … and … possible.

5. While intranet involves the … of a few hundred computers, Internet is a network of more than a billion computers …worldwide.

6. Both an intranet and the Internet use a server-client … and both networks transfer … using Internet protocols.

7. It goes without saying that an intranet, being restricted to a few computers is easier to… .

8. An intranet is controlled by a single server or server … which has absolute … over the entire network.

9. Corporate intranets restrict access of user by means of ids and passwords, which are not … to anybody outside the company.

10. One of the major points of differentiation is the … of … offered by intrenets and the Internet.

VII. Match the words in two columns so that they should form word-combinations from the text.

1. to arrange in the ascending	a. through the Internet
2. a scaled-down	b. of computer servers
3. to access information	c. set of services
4. to transfer data using	d. private Internet
5. a linked set of billions	e. server-client structure
6. to provide a limited	f. order of complexity and scaling
7. to use a	g. a few computers
8. to be restricted to	h. Internet protocols

VIII. Answer the following questions:

1) What will you find out if you arrange all computer networks in an ascending order of complexity and scaling?

2) What is the definition of an intranet?

3) What does an intranet operate through?

4) Do all intranets use private websites?

5) What kind of networks will you get if you integrate all local area networks?

6) How can we call the structure used by both the Internet and an intranet?

7) How many servers are necessary to control an intranet?

8) What is the difference of the Internet and an intranet in providing the range of services?

IX. Translate sentences from Russian into English:

1. Если все компьютерные сети в мире упорядочить в соответствии с их масштабами и сложностью, то получим на одном конце Интернет, а на другом – интранет.

2. Интранет – это сравнительно небольшая компьютерная сеть, доступ к которой имеют только сотрудники данной организации.

3. Использование Интранета является абсолютно необходимым, если работа компании связана с информационными технологиями.

4. И Интернет, и интранет осуществляют передачу данных с помощью протоколов.

5. Как Интернет, так и интранет, в принципе, имеют аналогичную структуру.

6.Управление интранетом осуществляется единым сервером, который контролирует все выполняемые задачи.

7.Интранет предоставляет ограниченный набор услуг в рамках одной фирмы.

8.Интернет старается угодить запросам всех обитателей Всемирной сети.

9.Итак, различия между Интернетом и интранетом заключаются в масштабах, принципах управления, а также спектре предоставляемых услуг.

X. Using Appendices 1 and 2, make a short summary of the text.

Unit 5
Internet Safety

Before you read:

I. Match English words and word-combinations from the text and their Russian equivalents:

1. to catch up with latest news	a. блокировщик всплывающих окон
2. to fall prey	b. угроза
3. fraudulent	c. обычная почта (НЕ электронная)
4. menace	d. подозрительный
5. nefarious	e. стать жертвой
6. legitimate	f. виртуальные опасности
7. to bait one's hook	g. обязательный для выполнения
8. snail mail	h. низкий, бесчестный; придуманный с целью получить выгоду
9. compulsory	i. мошеннический, жульнический
10. suspicious	j. запугивать, изводить, травить
11. pop-up blocker	k. насаживать наживку на крючок
12. to bully smb.	l. быть в курсе последних новостей
13. online perils	m. законный, имеющий силу

II. Answer the following questions:

1. Do you think browsing the Web regularly is safe for you?
2. What kind of online perils should you be aware of?
3. Do you know what things you should do to attain Internet safety?

III. Read the text and compare your answers with the information in the text.

In this article you can learn about Internet safety and how it is vital to protect your valuable information online.

The Internet has become an integral part of our daily routines: checking the email, catching up with latest news, downloading music, watching videos, playing games, sharing our thoughts via blogs, or even socializing with people over the net – many people do these things quite regularly. The Internet might be perhaps the most extensive resource for information but it is also a place with numerous threats and dangers. Internet safety is a concept that promotes safe web browsing without falling prey to scams and getting caught in scandals.

Fraudulent People Who Abuse the Internet

There are plenty of people who are waiting for easy victims over the Internet. Here is a list of different types of computer crimes.

Hacking. The activity of breaking into a computer system to gain an unauthorized access is known as hacking.

Criminals can hack your accounts and once they get access to your account, they will be able to control all your transactions and can misuse your account for illegal or criminal purposes. If it really happens, you could be virtually robbed as a result. Another highly dangerous computer crime is the hacking of IP addresses in order to transact with a false identity, thus remaining anonymous while carrying out the criminal activities.

Phishing is the act of attempting to acquire sensitive information like usernames, passwords and credit card details by disguising as a trustworthy source. Phishing is carried out through emails or by luring the users to enter personal information through fake websites.

To explain in a simple way, a nefarious site or person ("phisher") pretends to be a legitimate site to steal your personal information or financial records. So you think you are logging into your online bank account but you are actually logging into a very craftily disguised site that stores your login info to access your account. The term "phishing" is a word play on "fishing", where a fisherman baits his hook, fools the fish into thinking it is food and reels it in. Such tactics are a serious threat to online safety and individual users security.

Scammers. Online scams asking you to provide your important information and then misusing it are a huge menace over the Internet. Generally these scams attract people by sending out fake emails saying that you have won a prize or you have been selected as the lucky winner of some contest.

Spammers. Although the Spam emails are relatively harmless, they can fill up your inbox and be a constant source of irritating and unwanted advertising. Spammers can also pass on your address and phone numbers and bombard you with telemarketing calls and snail mail as well.

Pedophiles. The Internet is no longer safe especially for children with the presence of numerous pedophiles hunting for easy victims. They could trap children via chat, web cams and even bully them into meeting in person. Attack of a pedophile can be a traumatic experience for children.

Pornography Website Owners: Internet pornography is a major threat for people who frequently keep on posting their pictures and videos over the Internet. Make sure you do not upload your pictures and videos on unreliable sites that do not

provide you any privacy guarantees. Misuse of photos and videos in pornographic industry is a huge menace over the Internet.

Computer Viruses: Computer viruses are computer programs that can replicate themselves and harm the computer systems on a network without the knowledge of the system users. Viruses spread to other computers through network file system, through the network, Internet or by the means of removable devices like USB drives and CDs. Computer viruses are created with an aim to harm a computer system and destroy information. Writing computer viruses is a criminal activity as virus infections can crash computer systems, thereby destroying great amounts of data.

Cyberstalking: The use of communication technology, mainly the Internet, to torture other individuals is known as cyberstalking. False accusations, transmission of threats and damage to data and equipment fall under the class of cyberstalking activities. Cyberstalkers often target the users by means of chat rooms, online forums and social networking websites to gather user information and harass the users on the basis of the information gathered. Obscene emails, abusive phone calls and other such serious effects of cyberstalking have made it a type of computer crime.

How to Attain Internet Safety

Safe Internet browsing is the first and most important rule when it comes to users using the World Wide Web. Maintaining maximum anonymity is always the safest option while browsing the Internet or chatting.

Do not give out your address, telephone number, credit card number, social security number, passwords or even your complete name as long as it is not compulsory.

Do not allow strangers access to your web camera and even while chatting with strangers via instant messenger, try to block suspicious users.

While shopping on the Internet, make sure you select a reliable website. Avoid shopping on websites that you have never heard of, or seem fishy to you even if they are offering attractive deals.

Do not upload your photographs, videos and your personal information on social networking websites, which do not have privacy settings.

Avoid using Internet cafés while carrying out important transactions over the Internet.

For a safe Internet browsing experience equip your personal computer with filtering software, anti-virus and anti-spyware software, firewall detector and a pop-up blocker which will warn you and protect you against possible online perils.

http://www.buzzle.com/articles/internet-safety.html

IV. Give English definitions for the following terms. Check with the Glossary if necessary.

1) hacking, 2) phishing, 3)scamming, 4)spam, 5)computer virus, 6) cyberstalking

V. Close the text and fill in the gaps to complete the following sentences:

1. Internet safety is a concept that promotes safe web browsing without … …to scams and getting caught in scandals.
2. Hackers can get … to your bank account and can … it for illegal or criminal purposes.
3. Very often scams attract people by sending out …emails saying that you have won a … or you have been selected as the … winner of some contest.
4. A … site or person ("phisher") pretends to be a … site to steal your personal information or financial records.
5. Although the Spam emails are relatively …, they can fill up your inbox.
6. Pedophiles could … children via chat, web cams and even … them into meeting in person.
7. Misuse of photos and videos in pornographic industry is a huge …over the Internet.
8. Maintaining maximum … is always the safest option while … the Internet or chatting.
9. While shopping on the Internet, … …. that you select a reliable website.
10. Avoid using Internet cafés while … ….important transactions over the Internet.

VI. Close the text and form derivatives from the text to the following words:

1. social →	*verb*
2. private →	*noun*
3. harm →	*adjective*
4. to use →	*verb*
5. scam →	*noun*
6. legal →	*adjective*
7. craft →	*adverb*
8. fraud →	*adjective*
9. to suspect →	*adjective*
10. to rely →	*2 adjectives*
11. anonymous →	*noun*

VII. Match the first half of each sentence with the most appropriate second half

1. Every user should learn to browse the web	a. a word play on "fishing".
2. The activity of breaking into a computer system	b. be a constant source of irritating and unwanted advertising.
3. The term "phishing" is a	c. to harm a computer system and destroy information.
4. Generally scammers attract people	d. is a huge menace over the Internet.
5. Spam can fill up your inbox and	e. the safest option while browsing the Internet
6. Misuse of photos and videos in pornographic industry	f. is known as hacking.
7. Computer viruses are created with an aim	g. by sending out fake emails. .
8. Maintaining maximum anonymity is	h. without falling prey to scams.

VIII Answer the following questions:

1. Can you list different types of computer crime that exist nowadays?

2. Which of them do you find the most dangerous?

3. What is in common between fishing and phishing?

4. What is the difference between scammers and spammers? Which are more dangerous for Internet users?

5. What is "snail mail" and when did this term appear?

6. How can pedophiles trap children in the Internet?

7. How can parents restrict children' access to pornography websites?

8. What kind of computer crime is cyberstalking?

9. What recommendations should you keep in mind when you surf the Internet?

IX. Translate sentences from Russian into English:

1. Интернет стал неотъемлемой частью нашей повседневной жизни.

2. Существует огромное число мошенников, которые подстерегают своих жертв на просторах Интернета.

3. Хакеры могут взломать Ваш аккаунт и использовать его в незаконных целях.

4. Фишинговые сайты создаются с целью заставить пользователя ввести свои личные данные, которые затем могут быть использованы для доступа к Вашему аккаунту.

5. Скаммеры также охотятся за Вашей личной информацией, рассылая письма о том, что Вы выиграли приз или стали победителем конкурса.

6. Родителям следует беречь детей от педофилов, которые поджидают их в Интернет-чатах или социальных сетях.

7. Вирусы – это специально созданные программы, которые могут передаваться по сети и причинить вред Вашей компьютерной системе.

8. Киберсталкинг – это виртуальное преследование пользователя на основе информации, собранной о нем в социальных сетях, в чатах, форумах и т.д.

9. Каждому пользователю Интернета нужно следовать простым правилам безопасности, чтобы не стать жертвой мошенников.

X. Using Appendices 1 and 2, make a short summary of the text.

Unit 6
Advantages of the Internet in Education

Before you read:

I. Match Russian word-combinations and English equivalents from the text:

1. величайшее открытие человечества	a. to get a much deeper idea of smth.
2. проводить исследование	b. to broadcast on the Internet
3. устаревшие учебники	c. to review unclear topics
4. выполнять школьные проекты	d. unwanted or unethical information
5. получать доступ к мультимедийному контенту	e. to conference remotely
6. получить более глубокое представление о чем-л	f. to take up short-term courses
7. оказывать огромную помощь	g. the biggest discovery of mankind
8. общаться на расстоянии в режиме конференции	h. to gain deeper knowledge (in)
9. пройти краткосрочные курсы	i. outdated textbooks
10. повторять неусвоенные темы	j. to do research
11. транслировать по Интернету	k. to complete school projects
12. нежелательная или неэтичная информация	l. to aid tremendously (with smth.)
13. получать более глубокие знания	m. to access multimedia content

II. Answer the following questions:

1) What are the most common uses of the Internet in the field of education?

2) Which of these Internet facilities do you personally use in your studies?

III. Read the text and compare your answers with the information in the text.

The invention and development of the Internet was the biggest discovery of mankind in the 20th century that led to a revolution. Today, the Internet is used by more than 50% of the world population as its applications are found in nearly every fields of life: communication, knowledge, news, shopping, marketing, entertainment, education, etc. So what benefits does the Internet technology bring to students? Let us take a look at it in detail.

Easy Access to Information

The Internet has changed the way students learn by how quickly both teachers and students can access information. The Internet contains everything a person would want to know about a certain subject. Students can easily do research that would have taken days with traditional methods. Teachers can also find out the latest developments in a field they are lecturing on and give students current information as opposed to relying on outdated textbooks.

The Internet can be most useful for completing projects in schools and colleges. Homework is also made easier with the help of the Internet which is also one of the important uses of computers in education.

Multimedia

The Internet allows students and educators to access multimedia content that is not possible to view through other mediums. Students can learn about their subjects by seeing video, pictures and audio. This allows the student to get a much deeper idea of what they are studying. For example, a biology student may know a whale is a large mammal, but until he sees a video of a blue whale next to a diver, he may not fully appreciate just how powerful the animal is.

Communication

The Internet also allows students to communicate with each other more easily. Students are able to share information and contact their teacher via email, instant message and file transfers. This aids tremendously with group project work. Students can conference remotely with each other, working together advancing the project as if they were all together in the same room. This increases efficiency of the students' work and allows students to get communication skills that they will likely need in the workplace.

News

All the latest news are being constantly updated on the Internet on different news sites. Students learning politics, can have access to all the current affairs through the Internet in the school campus, at home, or at any other place. Historical data like speeches, biographies, etc. are also easily available on the Internet in detailed and accurate versions.

Online Learning

Another positive effects of Internet in education is the onset of distance education or online learning. With this facility, you can take up short-term courses with the course material available online, learn and take exams.

There are a lot of universities that have websites for students where they publish lessons, lectures, resources, notes and other topics related to the course for

students. Online learning spaces also can allow students to ask questions and post discussion topics in forums where both the educators and students can discuss.

Many post-secondary institutions and some schools broadcast their lectures on the Internet so that students who may not be able to attend the lesson can at least watch from home. Students can access these saved lectures later on. This aids students in studying for exams, as they can download the lectures and review any unclear topics.

Conclusions
With these points, we find that the importance of Internet in education cannot be denied and hence, every student should be given access to the Internet for deeper understanding and knowledge of a subject. However, students can also have an access to unwanted or unethical information and sites. Therefore, it is only wise for parents to make students understand what is good and what not for them, or keep a watch on their surfing.
Finally, although the Internet cannot replace books or classroom education, it is one of the best substitutes for those who wish to gain deeper knowledge in literally every subject. Good luck!
http://www.buzzle.com/articles/advantages-of-the-internet-in-education.html

IV. Fill in the gaps to complete the following sentences:

1. Today, the Internet is used by more than 50% of the … … as its … are found in nearly every field of life.

2. Teachers nowadays do not rely to …textbooks and tell students about the latest developments in a field they are … on.

3. … …. the information on the Internet is … faster than reading an entire book on the subject.

4. The Internet allows students and educators to … multimedia content.

5. Students can conference … with each other, working together … the project as if they were all together in the same room.

6. Students learning politics, can have access to all the … … through the Internet.

7. You can … … short-term courses with the course material … online, learn and take exams.

8. Online learning websites allow students to ask questions and … discussion topics in forums where both the … and students can discuss.

9. Students who may not be able to … the lesson can at least watch it from home.

10. Every student should be given … to the Internet for deeper understanding and knowledge of a subject.

V. Close the text and try to find derivatives from the text to the following words

1. to apply →	*noun*
2. to discover →	*noun*
3. date →	*adjective*
4. to define →	*adverb*
5. to entertain →	*noun*
6. to educate →	*2 nouns*
7. important →	*noun*
8. ethics →	*adjective*
9. advantage →	*noun*
10. political →	*noun*
11. to want →	*adjective*

VI. Make up word-combinations using separate words in both columns:

1. to complete	a. textbooks
2. to find out	b. a short-term course
3. outdated	c. a project
4. to access	d. remotely
5. to take up	e. a watch on smth.
6. to attend	f. lectures on the Internet
7. to increase	g. information
8. to conference	h. efficiency
9. to broadcast	i. a lesson
10. to keep	j. the Internet

VII. Match words similar in meaning to the words from the text:

1. powerful	a. to help, to assist
2. tremendous	b. old-fashioned, out-of-date
3. to aid	c. humanity
4. outdated	d. strong, mighty
5. current	e. to keep
6. mankind	f. huge, enormous
7. to save	g. to obtain, to get
8. to gain	h. present

VIII. Answer the following questions:

1. Why can the invention of the Internet be called the biggest discovery of mankind in the 20th century?

2. What benefits does the Internet technology bring to teachers?

3. How can the Internet help students to get a much deeper idea of what they are studying?

4. What Internet facilities can increase the efficiency of the students' team work?

5. What opportunities are offered by online learning sites?

6. Do you think online learning can replace real teachers?

7. What are the shortcomings of using the Internet in education?

8. Why should parents always keep watching on their children surfing the Internet?

IX. Translate sentences from Russian into English:

1. Огромное значение Интернета в сфере образования невозможно отрицать.

2. В Интернете содержится вся информация, которую человек хотел бы получить по данной теме.

3. Преподаватели в своих лекциях могут давать студентам свежую информацию вместо той, которая содержится в устаревших учебниках.

4. С помощью Интернета школьникам стало намного легче выполнять домашние задания.

5. Мультимедийный контент позволяет получить более глубокое представление об изучаемом предмете.

6. При выполнении групповых проектов студенты могут общаться в режиме конференции, как если бы они находились в одной комнате.

7. Одна из самых перспективных возможностей Интернета – дистанционное обучение.

8. Многие университеты выкладывают на сайтах лекции и электронные ресурсы, связанные с программой обучения студентов.

9. Для успешной учебы каждому студенту должен быть предоставлен доступ к Интернету.

10. Родители должны следить за тем, чтобы их дети не получили доступ к нежелательной информации.

X. Using Appendices 1 and 2, make a short summary of the text.

Unit 7
Internet Banking Problems

Before you read:

I. Match English word-combinations from the text and their Russian equivalents:

1. to encounter problems	a. чек, подтверждающий проведение операции
2. to eliminate wearisome waiting-lines	b. выписка из банковского счета клиента
3. transaction receipt	c. неавторизованная операция
4. bank statement	d. сайт-посредник, созданный с целью выманить личные данные пользователя
5. leakage of information	e. устранить утомительные очереди
6. to execute (conduct) a transaction	f. взломать аккуант
7. to gain access to a bank account	g. занимающий много времени
8. unauthorized transaction	h. столкнуться с проблемами
9. proxy websites	i. утечка информации
10. to crack one's account	j. разрешить проблему
11. time-consuming	k. предотвратить что-л.
12. connectivity problem	l. провести банковскую операцию
13. to sort out a problem	m. установить антивирусную программу
14. to ward off	n. получать доступ к банковскому счету
15. to install antivirus software	o. проблема подключения (к сети)

II. Answer the following questions:

1. Have you ever made any transactions online?

2. Do you feel secure when you deal with online banking?

3. What problems can you have when you carry out transactions online?

III. Read the text and compare your answers with the information in the text.

The popularity of Internet banking is growing rapidly as transactions are becoming faster and more convenient. However, there are some serious problems associated with this service. Internet banking is the latest development that has added a new

dimension to banking transactions by making it more convenient and has eliminated long wearisome waiting-lines. But there are some serious problems that you may encounter while banking through the Internet, due to which many still prefer to go directly to the banks instead of using this facility.

Internet Banking Issues
For making use of Internet banking properly, basic knowledge of computers and the Internet is required, which limits the number of people willing to use this facility. Many people, who are not comfortable with computers and the Internet, often find it difficult to use this service. Therefore, for beginners it is really time-consuming. In addition to this, people also find it difficult to trust a completely mechanized system like Internet banking, in case of financial matters. In many instances, a simple mistake, like clicking the wrong button, may create a big problem. And so, many individuals often keep wondering if they have properly executed the transaction. However, this uneasiness can be avoided by printing the transaction receipt and keeping it with oneself, until the bank statement is received.

While banking through the Internet, you have to be careful about the security of your Internet bank account. The security of your Internet bank account depends to a great extent on the security of your computer, password and pin number. Any leakage of information regarding your password or pin number and banking transactions can allow computer hackers to gain access to your bank account, which is the most common online banking problem. This can lead to unauthorized and criminal transactions being conducted without your knowledge. By the time you get your bank statement and detect such transactions, it may be too late. In this, you have to make sure that the banking session is secure, as in many instances you may encounter proxy websites. These proxy websites can easily access your bank account, if they can crack your user name, password or pin number.

Sometimes, it can be time-consuming and tedious, as many websites take quite a long time to get started. Besides, your Internet bank account may also take considerable time to get started. You may also encounter technical difficulties and connectivity problems while conducting banking transactions. Of course, there is a customer care department in almost every bank to look into such matters, but often you may not be able to get the necessary assistance due to the congestion in the computer and telephone network. On the other hand, in normal banking, you can simply converse with bank officials to sort out any problem.

However, with the advance in technology, many banks have taken the adequate measures to ward off any problems related to the security of Internet banking. Customers can also follow some simple preventive measures, like not disclosing the password and pin number to anyone, changing the password at regular intervals and installing antivirus software to ensure security and safety of their banking

transactions. So, many people can use online banking   for making their day-to-day financial transactions.

http://www.buzzle.com/articles/internet-banking-problems.html

IV. Fill in the gaps with the words from the text:

1. The popularity of online … is growing rapidly as transactions are becoming more … .

2. A simple mistake, like clicking the wrong…, may create a big problem.

3. You can prove your online payment by printing the transaction … and keeping it with oneself, until the bank … is received.

4. While banking through the…, you have to be careful about the security of your virtual … … .

5. Any …of information regarding your password or pin number and banking transactions can allow computer … to gain access to your bank account.

6. These proxy websites can easily …your bank account, if they can …your user name, password or pin number.

7. While … banking transactions you may also encounter technical difficulties and … problems.

8. You should always follow simple … measures when you deal with online banking.

9. Customers can install … software to ensure security of their banking … .

10. You can always …out all problems with the help of … care … of your bank.

V. Make up word-combinations from the text using separate words in both columns:

1. bank	a. leakage
2. transaction	b. website
3. information	c. software
4. proxy	d. statement
5. antivirus	e. banking
6. online	f. receipt

VI. Give the banking terms matching the following definitions:

1) an account created by the deposit of money at a bank by a customer;

2) a written acknowledgment that confirms the fact of bank transaction;.

3) a report prepared by the bank and sent to the customer to show all transactions in the customer's account;

VII. Match the first half of each sentence with the most appropriate second half

1. Internet banking is the latest development that	a. you have to be careful about the security of your Internet bank account.
2. There are some serious problems	b. like not disclosing the password and pin number to anyone.
3. While banking through the Internet,	c. can lead to unauthorized and criminal transactions being conducted without your knowledge.
4. There is a customer care department in every bank	d. that you may encounter while banking through the Internet .
5. For making use of Internet banking properly,	e. has added a new dimension to banking transactions by making it more convenient.
6. Any leakage of information	f. to sort out customers' problems.
7. Customers can follow some simple preventive measures,	g. basic knowledge of computers and the Internet is required. .

VIII. Answer the following questions:

1. Why is the popularity of Internet banking growing rapidly?

2. Why do many people still prefer to go directly to the banks instead of using this facility?

3. What knowledge is necessary for making use of Internet banking properly?

4. What document can help you to prove the fact of the online bank transaction?

5. What can any leakage of information lead to?

6. Can you explain what an unauthorized transaction is?

7. What is the objective of creating proxy websites?

8. What kind of technical difficulties can you encounter when using online banking?

9. What simple preventive measures should customers follow?

10. What kind of banks would you personally prefer to use: normal or virtual ones?

*IX. **Close the text and translate sentences from Russian into English:***

1. Популярность банковских операций через Интернет быстро растет.

2. Трансакции через Интернет позволяют избежать утомительных очередей и сэкономить много времени.

3. Однако, многие люди предпочитают идти в банк вместо того, чтобы воспользоваться такой удобной возможностью.

4. Элементарная ошибка, например нажатие неверной кнопки, может вызвать большие проблемы.

5. Когда Вы проводите операции через виртуальный банк, нужно следить за безопасностью своего аккаунта.

6. Любая утечка информации может позволить компьютерным хакерам взломать Ваш аккаунт и привести к финансовым трансакциям без Вашего ведома.

7. Иногда может потребоваться достаточно много времени, чтобы получить доступ к своему аккаунту в виртуальном банке.

8. В настоящее время банки принимают меры по обеспечению безопасности трансакций своих клиентов.

9. В каждом банке есть отдел обслуживания клиентов, который поможет Вам разрешить большинство проблем.

10. Клиенты должны соблюдать ряд простых мер, которые позволят обеспечить безопасные трансакции в Интернете.

*X. **Using Appendices 1 and 2, make a short summary of the first part of the text.***

Unit 7
Online Shopping – Pros and Cons

Before you read:

I. Match English word-combinations from the text and their Russian equivalents:

1. to be drawn towards	a. осведомленность, информированность
2. to flock towards	b. размеры, габариты
3. to gain immense popularity	c. окончить, завершить что-л.
4. awareness	d. розничный торговец
5. by far the most frequently used	e. быть привлеченным к чему-л.
6. dimensions	f. экономить на бензине
7. to be through with	g. держать на расстоянии
8. retailer	h. валом валить (куда-л.)
9. to save on **gas** (AmE)	i. предоставить выбор, разнообразие
10. to provide variety	j. порча, повреждение товара
11. to keep smb. at bay	k. приобретать огромную популярность
12. product damage	l. разрыв по времени
13. replacement	m. испытывать, проверять
14. time lag	n. наиболее часто используемый
15. to try out	o. замена

II. Answer the following questions:

1. Have you ever bought anything online?
2. If yes, what item was that? How did you pay for your purchase?
3. Did you enjoy online shopping experience?
4. Did you have any problems before or after sales?

III. Read the text and compare your answers with the information in the text.

A lot of people nowadays prefer to shop online because it is so convenient and easy. Every consumer who has experienced it will have his/her own views about it. This article will give you a clear picture about positives and negatives of online shopping so that you can easily analyze its risks and benefits.

Shopping from home

With increased use of Internet, more and more people are drawn towards online shopping. This way of buying products has gained immense popularity in today's times. Earlier, Internet was only accessible to people from developed countries, but nowadays it is used in almost all parts of the world. With increased awareness, people now flock towards the Internet for shopping.

You can shop for almost everything on the net: books, apparel, CDs and electronics. The sales of clothing, textiles and shoes comprise the largest segment of the online business and this makes it by far the most frequently used method for buying. The process of buying online takes you only several minutes. Ideally, you log on to the preferred or researched site and click on the product you wish to view in detail. The screen displays pictures of the item from different angles and other details such as range of colors, dimensions and price.

 Then you simply click on the item and place it into the shopping cart. Once you are through with shopping, the billing is done and the products chosen are shipped to you. The payments are done via credit card and the security of your personal details is guaranteed. There are a lot of retailers present on the Internet and they offer you real value for the investment and time spent online.

The concept of shopping for goods online has been highly recognized and accepted, as it provides a lot of benefits to the customer.

However, every good thing has some negative aspects, and this is true about online shopping as well. The advantages and disadvantages of this kind of convenience shopping are listed below.

Advantages

The best part of online shopping is that you can shop from home. There is no need to go to the mall and look for a place at the parking lot for your car. You just need to order and it will be available right at your doorstep.

As you shop from the comfort of your home, you save on gas and time that would otherwise have been spent to reach to the nearest store and look for the desired product.

It is convenient and easy! You do not need any degree to learn online shopping. All you have got to do is, visit the website, search for your product and buy it. Your product is just a click away!

Shopping online gives you the privilege to shop whenever you want. The stores are never closed and you can do your shopping 24x7.

It provides variety to the buyer. You don't need to travel from one shop to another to look for varieties of a product available in the market. The options available online are really numerous, and this is one of the best features of online shopping.

Shopping online provides simplified comparison of products and helps in deciding which one should be purchased.

Many websites offer special discount schemes from time to time to attract customers. You can always buy products under such schemes and save a lot of money.

It keeps annoying salesperson at bay. Aggressive salesmen often press on you to buy their products. You can simply avoid such kind of sales-assistants by shopping over the Internet.

Disadvantages

The first disadvantage is that there is a time lag between making payment and the delivery of the product. You cannot try out the product before buying it. Many people like to try things out before making payment. Unfortunately, when you buy a product online, you cannot touch the fabric you are interested in or smell a perfume.

High shipping costs often add up to the total cost of the product. Also, if the product is shipped from another country, you are liable to pay extra taxes for it.

The payment mode may not be secure. Paying online by debit or credit cards might be an insecure mode of transaction. It is therefore important to check whether the payment gateway is secured or not. For this reason nowadays many customers prefer to pay through PayPal which is a well-known and secure international payment system.

Possibility of product damage while shipping cannot be denied. If the product received is damaged, it may take some time for replacement or the company may not provide any replacement at all.

The ease of shopping can be extremely dangerous for shopaholics, as they may get provoked to buy many items at a time leading to unwanted expenditure.

You need to have a debit or credit card to make a purchase. Very few websites give you the option of paying cash or check on delivery.

If you are going to try this shopping method for the first time, I would advise you to get some tips for safe online shopping from your friends who have already tried it out, so that you could avoid making mistakes.

http://www.buzzle.com/articles/pros-and-cons-of-online-shopping.html

IV. Close the text and tell whether you agree or disagree with these statements:

1. The article gives you a clear picture about the benefits of online shopping.

2. Some years ago Internet was only accessible to people from developed countries.

3. The total sales of clothing, textiles and shoes makes up only a small segment of online business.

4. Nowadays there are a great many web shops that offer you real value for the investment and time spent online.

5. Shopping for goods online results in a lot of after-sales problems for the customer.

6. One needs to have a degree to learn online shopping.

7. Paying online by debit or credit cards might be insecure.

8. The biggest disadvantage of online shopping is the time lag between making payment and the delivery of the product.

9. Probability of product damage while shipping equals to zero.

10. When you shop online, you can always pay in cash or by check.

V. Find English equivalents in the text for the Russian word combinations below:

1) дать ясное представление о чем-л.; 2) отнимать всего несколько минут; 3) зайти на любимый сайт (под логином и паролем); 4) показывать изображение под разным углом; 5) выслать выбранные товары; 6) иметь широкое признание; 7) достоинства и недостатки; 8) искать место на парковке; 9) Ваш продукт на расстоянии всего одного клика мышью; 10) заниматься шопингом 24 часа в день и семь дней в неделю; 11) привлекать покупателей; 12) стоимость доставки; 13) платить лишние налоги; 14) международная платежная система; 15) приводить к нежелательным расходам;

VI. Match the words in two columns so that they should form word-combinations from the text.

1. to shop	a. the preferred site
2. to flock towards the Internet	b. the customer
3. to log on to	c. from home
4. to place the item into	d. and the delivery of the product
5. to provide a lot of benefits to	e. making payment
6. to offer special discounts to	f. for shopping
7. to keep annoying	g. the shopping cart on the screen
8. a time lag between making payment	h. attract customers
9. to try things out before	i. salesperson at bay

VII. Match the first half of each sentence with the most appropriate second half:

1. A lot of people nowadays prefer to shop online because	a. the billing is done and the products chosen are shipped to you.
2. The sales of clothing, textiles and shoes comprise	b. they offer you real value for the investment and time spent online.
3. Once you are through with shopping,	c. the largest segment of the online business
4. There are a lot of retail web-shops on the Internet and	d. you cannot try it out.
5. There is no need to go to the mall and look for a place	e. to shop whenever you want.
6. Unfortunately, when you buy a product online,	f. it is so convenient and easy.
7. Shopping online gives you the privilege	g. it may take some time for replacement .
8. If the product received is damaged,	h. at the parking lot for your car.

VIII. Answer the following questions:

1. What is the best advantage of online shopping?

2. What kind of products can you buy over the Internet?

3. How long will it take you to buy something online?

4. What ways of payments are usually used when customers buy online?

5. What are other beneficial sides of buying online?

6. Why is the time lag between payment and getting the purchase the biggest disadvantage?

7. Which products can't you buy online because you cannot try them out?

8. Why isn't payment online by credit card always secure?

9. What happens if the product received is damaged on its way to the customer?

10. What kind of people is shopping online extremely dangerous for?

IX. Translate the following sentences from Russian into English :

1. В настоящее время покупки по Интернету приобретают огромную популярность.

2. Чтобы сделать покупку, требуется всего несколько минут.

3. На экране можно увидеть изображение нужного товара под разными углами, а также другие детали – размеры, расцветки, цену.

4. Оплатить покупку можно кредитной картой или через международную платежную систему ПейПал.

5. Однако, все хорошее имеет свои негативные стороны, и это справедливо относительно Интернет-шоппинга.

6. Самое приятное в покупках по Интернету – это то, что Вам не нужно для этого выходить из дома.

7. Вы экономите свое время, бензин и сохраняете нервные клетки, избегая общения с назойливыми продавцами.

8. Вам нужно просто заказать нужный товар и его принесут прямо к дверям.

9. Главный недостаток покупок по Интернету – в том, что проходит много времени между оплатой и получением посылки (parcel).

10. Если полученный товар был поврежден в пути или имеет дефекты (faults), то замена товара может отнять много времени.

11. Многие покупатели и продавцы предпочитают оплату через ПейПал, поскольку она гарантирует безопасность сделки.

X. Using Appendices 1 and 2, make a short summary of the text.

Unit 9
The future of the Internet: Web 2.0 Vs. Web 3.0

Before you read:

I. Read some facts from the Internet history and statistics and guess if they are true or false. You can check your answers on p.

1. The first mouse was made of wood.

2. 30% of Internet users are men while 70% are women.

3. An Internet user blinks less than 10 times a minute, 20 being the average for a normal person.

4. Sir Tim Berners-Lee coined the phrase 'World Wide Web' (www) in 1980.

II. Match Russian terms with their English equivalents from the text:

1. искусственный интеллект	social media
2. поисковая система	semantic web
3. поисковый запрос	plug - in
4. семантически структурированная сеть	search query/request
5. подключаемая программа, выполняющая какие-либо дополнительные функции в главной программе	artificial intelligence
6. социальные сетевые сервисы	search engine

III. Answer the following questions:

1. How do we call the current version of the Internet?

2. What was the main difference between the Web 1.0 and Web 2.0?

3. What features do you think the Internet will have in the future?

IV. Read the text and compare your answers with the information in the text.

The future is hard to predict, especially with something as fast moving as the World Wide Web. Many experts suppose that the current Web 2.0 might evolve into Web 3.0. First of all, it is important to note that there is no set definition of

what Web 3.0 is. This is a concept best described as the advanced **artificial intelligence** acting on the semantic web where all information is categorized and stored in such a way that a computer can understand it as well as a human.

It is difficult to talk about Web 3.0 without mentioning a little bit about Web 1.0 and Web 2.0. Web 1.0 is the term used to describe what the original web was, with static, brochure type websites and not much interactivity. Then came the burst of the .com bubble and then emerged what is termed as Web 2.0, offering **social networking**, wikis, **blogs,** video sharing, **search engines** and e-commerce tools that we take for granted on a daily basis.

Web 2.0 has made the web truly open, global and interactive, it is characterized mainly by the ability of users to share information quickly with others, which has been developed into the phenomenon that we call **social media** - from Twitter to Facebook, YouTube and to all sorts of other communities. Now with Web 2.0 on its way out, the obvious question is, what in the world is Web 3.0 going to be?

To many, Web 3.0 is something called the **Semantic Web**, a term coined by Tim Berners-Lee, the man who invented the (first) World Wide Web. In essence, the Semantic Web is a place where machines can read Web pages as we humans read them, a place where search engines can better surf the Net and find what we're looking for. "It's a set of standards that turns the Web into one big database," says Nova Spivack, CEO of Radar Networks, one of the leading voices of this new-age Internet.

How Will Web 3.0 Work?
It will be aimed at making web usage more personal experience for a web user. The information presented to him will be modified according to his specific needs and past searches on the web. The web will be like a close friend or an assistant who knows enough about you to satisfy your personal needs. While this idea seems ludicrous, that is one of the goals of Web 3.0. We are already taking steps towards it through social networking sites like Facebook, that provide information tailored to a user's expectations. For example, if you do a lot of searching for 'design blogs', you'll receive more advertisements related to design. Also, when you search for other things, for example, 'computers', the web will keep in mind that you often search for design and may pull up **search queries** that combine 'design' and 'computers'. So from the example above, you can see that Web 3.0 is a concept where the web becomes much more intelligent than it is to make the current Web 2.0 easier and more interesting to use.

Interactive 3D content
As Web 3.0 becomes fully implemented, the use of interactive 3D content without the use of **plug-in**s such as Flash or Silverlight will be possible across all browsers and platforms as the use of HTML5 grows. This will open up a whole new gaming and simulation platform which will for example allow doctors to share 3D models

of a patients' heart in live animation and be able to twist and turn it to view it from all angles. The possibilities are endless.

Other bold projections of what Web 3.0 will be all about a web being a parallel virtual world. One example would be a web space consisting of shops in a mall where from the comfort of the home you can walk right through and make purchases as though you were really there in the mall or you could take virtual rides at popular theme parks to aid your decisions for your next vacation. This is not just restricted to one building or theme park but to the entire world, with building roads and structure like never seen before.

What people predict is that Web 3.0 will be a more personalized and intelligent World Wide Web that will function like your personal assistant. Technology has always had a nature of surprising its creators with possibilities that they wouldn't even have dreamed of. So all futurists predicting the nature of World Wide Web or Web 3.0 might be a big surprise! All we can do today is only imagine what it could be!
http://www.buzzle.com/articles/web-30-vs-web-20.html

V. Find Russian equivalents for English word combinations below:

1) to evolve into; 2) set definition; 3) to emerge; 4) to take for granted; 5) on its way out; 6) to be coined (by); 7) CEO (Chief Executive Officer); 8) to be aimed (at); 9) to be modified; 10) ludicrous; 11) tailored to a user's expectations; 12) simulation; 13) bold projections; 14) to take virtual rides;

VI. Fill in the gaps with word-combinations from the text:

1. Many experts suppose that the current Web 2.0 might … into Web 3.0.

2. Web 1.0 is the term describing the original web , with static, … type websites and not much … .

3. Web 2.0 has offered users such facilities as social …,   blogs, video sharing, search … and e-commerce tools.

4. Web 2.0 is characterized mainly by its … - the ability of users to share information quickly with others, which has been developed into the phenomenon that we call … media.

5. The term Semantic Web was … by Tim Berners-Lee, the man who invented the (first) World Wide Web.

6. Web 3.0 will be aimed at providing information … to a user's expectations.

7. Web 3.0 is a … making the web much more intelligent than it and more personalized for every user.

8. The information presented to a user will be … according to his specific needs and past searches on the web.

9. In the future it will be possible to download interactive 3D … without the use of … such as Flash or Silverlight .

10. The bold … of what Web 3.0 will be all in the future are describing an exciting parallel … world with its **netizen**s!

VII. Match the first half of each sentence with the most appropriate second half

1.The impact of the Internet on our life	a. has made it possible to access the Internet from anywhere.
2. To find some information,	b. websites for promotion their goods and services.
3. The rapid progress of technology	c. checking exam results, exam schedules and so on.
4. Many of us cannot imagine our life	d. we all have acquired the habit of "Googling" .
5. Almost all businesses these days have	e. can also be used for shopping .
6. Students use websites for	f. cannot be sidelined .
7. Apart from these common uses, the Internet	g. without social networking sites.

VIII. Answer the following questions:

1) What is the main feature of Web.02 that differs it from Web 0.1?

2) Who invented the terms WWW and Semantic Web?

3) Is there a set definition of what Web 3.0 is?

4) What is included into the concept of Semantic Web?

5) What does the author mean when he tells that the web will be like a close friend or an assistant?

6) What opportunities will the new gaming and simulation platform for users?

7) What are the other bold projections of Web 3.0?

IX. Translate sentences from Russian into English:

1. Когда говорят Web 1.0, то имеют в виду первоначальный Интернет, с его статическими сайтами в виде простого набора страниц и отсутствием интерактивности.

2. Web 2.0 сделал сеть действительно глобальной, открытой и интерактивной,

предложив пользователям социальные сети, блоги, вики, поисковые системы, uTube, электронную коммерцию и много др.возможностей.

3. Термин Semantic Web был придуман Т.Бернерсом-Ли, который в 1990г. создал термин Всемирная паутина.

4. Работа Web 3.0 будет организована так, что Интернет сможет предложить индивидуальный подход для каждого пользователя.

5. Сеть станет для Вас близким другом или помощником, который хорошо Вас знает и сможет удовлетворить Ваши требования.

6. Использование интерактивного 3D-контента откроет новый шаг для онлайн-игр и моделирования.

7. Самые смелые проекты о том, какой будет Web 3.0, описывают параллельный виртуальный мир, в котором, например, Вы сможете совершать виртуальные поездки в популярные тематические парки.

8. В настоящее время мы можем только воображать, чем удивит нас Web 3.0!

X.   Prepare 10-15 min. presentation about the Internet evolution.

Appendix 1.
How to write a summary

Giving a good summary demonstrates that you clearly understand a text. By following our easy 7-step method, you will be able to summarize texts quickly and successfully for any subject.

1. Divide…and conquer. First of all, skim the text you are going to summarize and divide it into sections.

2. Selecting information. Underline topic sentences and key facts. Also label information that should be avoided.

3. Key words. Think of some key words for every section, you will need them for the next step.

4. One sentence at a time. Now write down the main idea of each section in one well-developed sentence. Make sure that what you include in your sentences are key points, not minor details.

5. **Write a thesis statement.** Review the sentences you wrote in step 4. From them, you should be able to create a **thesis statement** that clearly communicates what the entire text was trying to achieve.

6. Ready to write. You can use the thesis statement as the introductory sentence, and your other sentences can make up the body of your summary. Make sure that they are in order. Add some transition words (*then*, *however*, *also*, *moreover*) that help with the overall structure and flow of the summary. The phrases from **Appendix 2** will be helpful.

Remember these tips:

- Write in the present tense.
- Make sure to include the author and title of the work.
- Be concise: a summary should not be equal in length to the original text.
- If you must use the words of the author, cite them.
- Don't put your own opinions, ideas, or interpretations into the summary. The purpose of writing a summary is to accurately represent what the author wanted to say, not to provide a critique.

7. Check for accuracy. Reread your summary and make certain that you have accurately represented the author's ideas and key points. Make sure that you have correctly cited anything directly quoted from the text. Also check to make sure that your text does not contain your own commentary on the piece.

Appendix 2.
How To Render The TEXT

1. Headline / Title of the article	The text is headlined... The headline of the article is... The article goes under the headline/ title... The article under the headline... has the subhead... The title of the article is... The article under my consideration is entitled...
2. Place of origin	The article is (was) printed / published in... The article is from a newspaper under the nameplate...
3. Time of origin	The publication date of the article is... The article is dated the first of October 2008. The article is printed on the second of October, 2008.
4. Author	The article is written by… The author of the article is... The article is written by a group of authors. They are…
5. Theme / Topic	The article is about... The author raises the problem of… The article is devoted to... The article deals with the topic... The basic subject matter of the script is... The article touches upon the topic of... The article addresses the problem of... The article raises/brings up the problem... The article describes the situation... The article assesses the situation... The article informs us about… / comments on… The headline of the article corresponds to the topic… In the focus of author's attention lies the problem of… The problem is a burning/ an acute/ vital one. The problem is of utmost importance/ is little spoken of/ is widely discussed…

6. Main idea / Aim of the article	The main idea of the article is… The purpose of the article / author is to give the reader some information on... The aim of the article / author is − to provide the reader with some information about...; − to provide the reader with some material / data on... − to inform about...; − to compare / determine...;
7. Contents of the article	The article can be divided into some parts. The first part deals with... The article begins with… The second covers the events... The third touches upon the problem of... The fourth part includes some interviews, dialogues, pictures, reviews, references, quotations, figures. The article is written in the form of the monologue, from the first / third person narration. The author starts by telling the reader that... (writes, states, stresses, depicts, says, informs, underlines, confirms, emphasizes, puts an accent on, accepts / denies the fact, reports, resorts to, hints on, inclines to, points out... and so on) After describing …. the author turns to…. Later the article / the author describes... The article / the author goes on to say that... According to the text...

8. Conclusion.	In conclusion... The author comes to the conclusion / concludes that… The key sentence / words of the article (is / are) the following... The end of the text is sad/funny/interesting/(un)predictable/(un)usual/ surprising/ philosophic/ common/ ordinary/ strange…
9. Transition words.	in the first place not only ... but also as a matter of fact in addition to say nothing of equally important although this may be true in contrast different from of course ..., but on the other hand on the contrary at the same time even so / though then again in reality as can be seen generally speaking in the final analysis as shown above

Appendix 3.
Texts for rendering

1. Pros and Cons of Social Networking

Social networking sites are rapidly gaining popularity among the youth today. The basic purpose of these sites is to bring families and friends together. Along with the clear purpose of these sites, many people have also misused this medium. This article will give you some positives and negatives of social networking.

Networking sites are now a great source of communication, and serve the purpose of bringing long lost friends and families together. There are now many such sites around, that have laid down a platform for people of different parts of the world to come together. Also, these sites are treated as a stage to set up small businesses or even promote brands to gain some potential clients. However, the trend of being a part of these websites is more visible among teenagers and youth. These youngsters are at all times engrossed in the world of networking, without really knowing its benefits as well as dangers. Just as this form of networking has advantages, it also has its own bad features.

Some Positives
There are so many ways in which social networking has changed our lives for the better. Let us have a look at the most important ones.
The role and future of social networking sites is to maintain simple and easy interaction among people. Friends who have lost touch can again connect with each other and always stay in touch. Also, with the various privacy settings, one can customize their profiles and categorize their friends and family accordingly, and make groups to make chatting easy. These sites always help people to stay connected most of the time, and makes sharing and talking easy.
Other than only connecting with friends, many people can even meet and talk to other people who come from different countries, and get to know their culture and way of living. It is a good platform for getting to know different people.
Also, it provides us with cheaper communication. Through these websites, promoting your business idea is simple, as one can find potential clients by just sitting at home.
Sharing pictures and videos is also possible through these sites. They give the opportunity to create your albums and videos, and post them in your profile.
With the facility of sharing pictures and also chatting, the distance between people has reduced too.

Some Negatives

Though these sites bring a lot of benefits to people all around, the basic purpose of them is being abused too. Let us take a look at the various disadvantages.

These sites require people to create their own profile on the site. These profiles are created out of revealing one's personal details, which could be misused by other unknown people.

The profile demands the certain interests and contact details that could cause a problem for youngsters.

There are certain sites that provide privacy settings, by which one can hide all their personal information to strangers, and keep it visible to only known friends. However, many are not aware of these privacy settings and do not use them correctly.

Also, some youngsters are willing to abuse someone's space or privacy, and even create a fake profile to cause them problems. In this case, the person must immediately block such a profile, which will stop such kind of disturbances to their privacy.

Online scams, stalking, identity theft, etc., are other huge and stressful problems that are caused under these sites.

There is also a possibility of your account being hacked. This could be a huge problem as the hacker might tend to forward obscene pictures or send messages through your account to your social network. To avoid this, one must keep a check on the privacy settings, and the password must be renewed from time to time.

Last but not the least, millions of people around the world are addicted to these networking mediums, and for no constructive purposes, which results in a lot of waste of productive time that could be used for something better.

People of all ages can be a part of the social network. However, maintaining strict privacy and not intruding into anyone's space is essential to avoid any sort of bad practices. These sites are brought up for the purpose of bringing people of similar interests together, and to even promote an idea of business to reach out to people all around the world. When the authenticity of such sites is maintained, then one can realize the actual purpose and potential of these websites.

http://www.buzzle.com/articles/an-overview-of-the-pros-and-cons-of-social-networking.html

2. Types of Internet Addiction

Any kind of addiction is harmful and can cause damage and disruption to our daily life. Computer addiction can also be harmful physically, mentally, and emotionally. There are many factors that lead to computer or Internet addiction.

Nowadays computer users have started developing some bad habits regarding using computers, which have led to significant problems in their lives. As a result, the term 'computer or Internet addiction' has come into use. It is also known as

cyberspace addiction and Internet Addiction Disorder (IAD). There are several types of Internet addiction which are more common among computer addicts.

Online Games

These have become a craze among many people, especially children. There are thousands of online games that can be accessed and played on the Internet, which are also loaded with high-end graphics and advanced sound. Children love games, that is why they are   vulnerable to excessive gaming. An online game is a multi-player game wherein many players can join in to play the same game, which is an exciting and enjoyable activity for many. This is where the player assumes a game character and plays against or in a team with other people from all around the world. Children who use the Internet or computers are surely prone to online gaming. They would not be very familiar with social networking and blogging websites though. Online gaming is a type of addiction that is found mostly in children, but today the wide variety in games attracts teenagers and youngsters. Action-packed and violent games can lead children to violence which may ruin their future. Some children and youngsters are so addicted to online gaming that they spend over 12 hours every day playing games.

Chat

This is an exciting application, if used within limits. Chat is an interface which is used by an individual to communicate with other people who are online at the same time. It is also known as live communication over the web. People use chat as a way of interacting with each other. Their motives can be different like chatting with an online friend or one whom they personally know, corporate-conference chatting, and even chatting in chat rooms with unknown people. In most cases, chat addicts are people with anti-social problems, they may be shy or may have other problems that stop them from meeting people in the real world. There are many websites that offer chat facilities under a free membership.

Email

It is similar to chat where the user sends an electronic message to the receiver and the receiver responds back to the sender after checking his inbox. It is a periodical communication or an offline chat. There is not much chance to get addicted to emails, but checking emails suddenly during the night or at frequent regular intervals is a sign of the computer addiction.

Online Shopping

It is a concept wherein on the Internet; a user selects a product and purchases it from retail websites after providing them with necessary information, like mailing address and credit card details. It can surely make a big hole in one's pocket. Online shopping addicts insure no limit to their credit cards. They have many credit cards that are allocated to each online store. They subscribe to dozens of shopping catalogs, tune in to television shopping channels to get the latest deals and offers during work, and select 'yes' or 'allow' for everything on the online shopping site. Just a click of a mouse can take away a lot of money from the credit card and rack up enormous debts.

Online Gambling

This is the most dangerous type of computer addiction. There are some websites that offer gambling games online, which attract gambling addicts to play and lose all their money. Extreme debts have been incurred by gambling addicts. Some lose everything like their bank balance, house, car, and many other possessions. A gambling addict may gamble frequently or infrequently. Problems that are caused by online gambling are not just financial, but also can have a bad effect on personal life as well. The financial losses incurred due to online gambling are far more than those in online shopping.

Online Pornography

One should keep in mind that Internet porn may or may not be legal in every country. Individuals who are addicted to this type are mostly teenagers and youngsters. It can have an adverse effect on a child's attitude towards relationships. People who are addicted to online pornography spend hours watching or downloading porn.

Social Networking and Blogging

It focuses on building online communities of people who share common interests and activities, or who are interested in exploring those of others. Social networking websites are being used frequently by millions of people worldwide. Few do it for entertainment, passing time, presenting views and opinions, etc., but there are many who are addicted to social networking. A social networking and blogging addict will have more online friends that real-life ones and will also have many blogs on various networking sites.

Other Computer Addictions

There are some people who are glued to the computer without a specific reason. They spend most of the time in the day surfing and browsing, watching online or offline videos, listening to music, playing games, etc.

No one knows in the future, which technology would attract more people to become computer addicts. However, there are various organizations that specifically deal with computer addiction and have helped many thousands of people get rid of this damaging addiction. They give advice on helping computer addicts get back to normal life again.

http://www.buzzle.com/articles/types-of-computer-addiction.html

3. Online Educational Computer Games

The ongoing development of computer and Internet applications has resulted in the emergence of a whole new species of online computer games. Yes, online games form a major part of the Internet media. They have managed to draw in a large section of users, who indulge in online gaming activities for educational and entertainment purposes. Online computer games have amassed immense popularity from web users and their development continues.

Considering the rising popularity of online gaming; game developers ventured into new areas of online game creation and the genre of educational computer games was born. With the advent of educational online games, the Internet came to be regarded as a platform where learning was fun. Online educational games brought together, education and entertainment. They contributed to bringing the dream of interactive learning into reality.

Owing to the multimedia capabilities of computers and the audio and video streaming features supported by the Internet, lively and interactive educational games can be developed. Thanks to the relatively easy methods of Internet access, online educational games could amass a huge following.

What do educational computer games offer? They offer an innovative approach to teaching and learning and help in motivating the students towards education. They serve as an excellent aid to education and provide teachers with creative tools to educate children. They are intended to teach their users, a certain subject, reinforce certain concepts and assist the development of their learning skills. Online educational games cater to a wide range of web users. Some cater to the educational needs of high school and college kids while others are meant for preschoolers. Their layout and functionality varies depending on the age group of the users they cater to.

Educational computer games for preschoolers often aim at assisting kids with development skills and introducing them to numbers, alphabets, basic shapes and colors. These online games often offer the preschool kids, an opportunity to color pages, play math and letter games, solve simple riddles and thus acquire preliminary education through interesting ways. Some online educational games assist the preschoolers with certain creative art and craft activities.

Educational computer games designed for school and college students include activities like building words and playing with numbers and understanding basic concepts in science through interactive learning. Fundamentals of geometry can be effectively explained with computer games due to the computer's ability of displaying 3-D images and animations. Scientific concepts like rotation, Earth's gravitation, motion and acceleration can be explained with the help of computer games, thus adding fun to learning.

Many websites offer free online games like treasure hunts, memory games and puzzles. Some websites feature quizzes, at times, derived from television shows and quiz contests. Online game developers target the masses by deriving concepts from popular reality shows, video games or other traditionally prevalent games. Online adventure games are nonetheless educative as they help in the development of problem-solving and analytical skills. Many adventure games also require the

players to plan strategically, analyze situations, venture risks and resolve mysteries.

True, some computer games involve violence. An overexposure to online games can result in adverse effects on the players. But, an adequate use of the Internet media is sure to help in making education, a fun-filled activity. Educational online games add to the fun element to education and make the otherwise monotonous process of learning, an enjoyable endeavor!

http://www.buzzle.com/articles/online-educational-computer-games.html

4. Uses of computer in society

A 500-page book can be easily filled with the many uses of computers, where still, some uses will be left out. Computers are, perhaps the best invention by man so far. To understand their impact on society, we first have to understand the meaning of 'computer'. A computer does not necessarily mean a monitor, keyboard, mouse, and a CPU. It is any machine or device that can compute and execute instructions given to it in the form of programs. So technically, even a cell phone is a computer. And so are desktops, laptops, tablet PCs, and PDAs. Anything that can perform a series of operations on its own is a computer. This gives an idea as to how wide and deep their roles are in our lives. We need a computer for virtually everything.

Application of Computers. It started with the calculators and punched cards, and moved to vacuum tubes and then the transistors and printed circuit boards. The evolution of computers is still on and at a crazy pace.

Science. One of the most important advantages of computers is in the field of science for research and development. The computers have played a major role in most of what we know about ourselves and the universe. The satellites, the telescopes and almost all the research tools make use of computers in some or the other way. The huge calculations required for space science, safe communication between scientists, storage of all the gathered information are some of the computer uses in science and technology.

Medicine. Research and development mark significant presence of computers in the daily life. The high- end machines used for diagnosis and cure of many diseases are nothing but computers. For example, the Magnetic Resonance Imaging (MRI), CT scan, ultrasound devices, etc are amongst the most ubiquitous uses of computers in hospitals. Even many surgical procedures, known as laparoscopic surgeries, need the help of computers. Web conferencing helps doctors treat people remotely.

Education. Computer uses in the field of education are infinite. The Internet is a huge source of information. There are online universities that deliver online degrees and distance learning is spreading far and wide. Many schools and colleges

have started making use of audio- visual ways of imparting knowledge. A horde of tools that need a computer, help students in many ways. For instance, a MS word, Excel, PowerPoint, etc.

Banking. The banking sector has improved on fronts such as security, ease of use, etc. with the help of computers. Most of banking operations can be done online, known as Internet banking, and you don't have to walk up to the bank for virtually anything. You can withdraw money from ATMs and deposit money in any branch, thanks to the networking affected by the use of computers. The complete banking experience has also become safer.

Crime Investigation. High-end computer devices have ensured that justice is more effective. CCTV cameras and other computer operated security systems have reduced the amount of crime. And if it still happens there are many ways to track down the criminal in no time. Forensic science employs computers for many of its operations related to investigations.

Entertainment. The field of entertainment has been revolutionized by computers. Animation and graphic image manipulation have made the entertainment experience hundred times better. Computer gaming is achieving new landmarks in terms of technology. Movie making, editing, music composition, everything needs computers.

This is only the tip of the iceberg as we can't even imagine the ubiquity of computers in today's life. However, the development of computer technology has also given rise to many vices like identity theft. But the truth remains the same- the advantages of computers supersede their disadvantages with pride.

http://www.buzzle.com/articles/uses-of-computers-in-society.html

5. The Use of Computers in Banking

Web-based banking is one of the benefits of the use of computers in banking institutions. Computers have a wide range of use in the banking industry. Computers can record transaction histories of account activity, perform sample audits of accounts, process loans and provide robust customer service activities through Web-based banking. Most banks use mid-range or client-server computer configurations which can be duplicated in affiliate banks.

Customer Accounts. Computers are used to automate customer accounts categorized into savings, checking, loan and diverse investment accounts. The computer keeps track of customer account records through a transaction history record. Most banks deploy computer systems using real-time processing or batch processing updates. Computer systems are also linked to customer service kiosks such as ATMs (automated teller machines), which provide people access to their money 24 hours a day.

Branch Banking Support. Computers are also vital in supporting branch banking activities. Computers at branch banks are connected to the computer at the main bank through remote communications established by a modem over a client-server computer network. The same applications used at the main bank can be used at the branch bank. Because the cost of computer hardware systems is reasonable, most branch banks deploy their own servers to connect with the main computer and are able to process banking reports which are produced in a print file at the main bank.

Information Systems Audit. The Federal Deposit Insurance Corporation (FDIC) and the Federal Reserve Board (FRB) establishes guidelines and policies concerning banking information systems. These include the auditing of various accounts and processes revolving around the use of computers in banking, ranging from account management to direct-deposit systems. Most computer systems consist of software which can perform sample audits on loans and specialized accounts to determine if the bank is in compliance with Federal and State regulatory laws. Auditing plays a major role in bank information systems management.

Internet Banking. Internet banking (also called electronic or online banking) provides bank customers the option of performing banking transactions online through a bank-authorized website. The customer is given a user identification code and password from the bank to log in and perform a range of services. The actual Web-based interface is connected with the main computer through a Web server which collects and disseminates all transactions and updates main account records. Computers which process Internet transactions are required to have certified physical, transaction and firewall security approved by State and Federal regulatory agencies.

6. The Role of Computers in Psychology

Psychology is the study of people, so it is natural to assume that computers have no role in this discipline. However, that would be misleading. Psychology, like many academic fields in the social sciences, relies very heavily on the use of computers. Computers are important in providing psychologists with the tools and capabilities to study the human mind and human behavior. They are necessary to expand psychological research and are present in almost all aspects of psychological practice.

EEG Imaging Techniques. EEG (Electroencephalography) is an important brain imaging technique that could not be performed without the use of computers for recording and analyzing the output. EEG is a technique that is performed on psychological and psychiatric patients to detect any abnormalities related to electrical activity in the brain. Brain cells communicate through the use of electrical impulses. These can in turn be detected and recorded at the surface of the

scalp through an EEG procedure, which tracks and records these electric patterns in the brain. Normal activity in the brain produces electrical signals that form a recognizable pattern. Psychologists most often use EEG to diagnose and monitor seizures and epileptic disorders, but EEG can also be used to identify causes of many other disorders, including sleep disorders and changes in normal behavior, or problems in language development. It is also used when psychologists are evaluating brain activity after a severe physical trauma, to determine whether the patient has experienced any cognitive abnormalities due to the injury.

fMRI Techniques. Another significant brain imaging technique that would not be possible without computers is fMRI - functional magnetic resonance imaging. This process uses an extremely powerful magnetic field, sound frequency pulses and a computer to produce detailed images of the brain (and other organs) and to measure the small metabolic changes that are apparent when a part of the brain becomes active. fMRI is particularly important to the study of psychology because it allows researchers to match specific parts of the brain to specific cognitive tasks (such as reading, memory, and speech).

Educational Psychology. Instructional technology is a rapidly growing sub-field of educational psychology that is focused on studying the impact that digital media (such as computers) have on education and child development. Research in educational psychology focuses on the different implementations of computers for the benefit of classroom instruction. It studies digital whiteboards, video games, social networks, and digital mind-mapping programs - all of which could not exist without computers, and all of which are at the cutting edge of current educational theory and practice.

Research and Analysis. Computers are also very important in psychological research, particularly because contemporary psychological research is so statistically intensive. Computers are often used in conjunction with specialty software (such as SPSS and SAS) for processing and analyzing large data sets. Psychological research, in many cases, is focused on studying large populations over long periods of time. Computers and software technology is necessary to process this data in a speedy and constructive way to facilitate psychological research and create a data store for future researchers to draw upon.

Considerations. Computers have recently become quite ubiquitous, but it is still important to remember that they are a relatively recent innovation, and that many academic fields, particularly psychology, have existed without them for a very long time. Computers make the lives of all professionals and researchers significantly better, but it is also possible to become overwhelmed with the many technological possibilities that computer present. Thus, sometimes, it is best to treat them as just one tool out of many, and to not rely on them too heavily in designing psychological practices and research agendas.

7. Types of Online Advertizing

Advertising has undergone a sea change since its inception, not only in its methods, but also in its medium. Online advertising has become a widely sought complement (if not an alternative) to other forms of advertising. And even within online advertising, there are different types that aim at reaching different clientele by using different tactics, techniques, and even technologies. In this article, we will give you a glimpse of some of the major online advertising types used.

Online Advertising Types
What are the different types of advertising that are used by people who market their services or products online? Given below are some of the major types into which one can categorize online advertising.

Banner
The first and relatively widely used type of online advertising is a banner ad. You may have noticed a strip (horizontal or vertical) highlighting a particular company's name, services, and tag line at the top, bottom or sides of the web page. This is a banner ad and its size depends on the space that the company gets on a website.

Pop Ups
This is another quite a familiar type of online advertising. When you visit a particular website, you are sometimes warned by your browser about it having blocked a pop up. At other times, as soon as you enter a website, before you can view the content you wish to, you are made to view a pop up ad of a particular company. This type of online advertising is considered invasive and hence browsers are enabled with blockers.

Email or Newsletter
Using email and newsletters can be termed as merely an advancement of snail mail. Following the same principle of picking random postal addresses, email ads target email addresses that may have been entered on a site that may cater to a need the user may have felt at some point of time or completely random ones. Newsletters however are mostly sent to those users who subscribe them.

Video Ads
You are sure to have come across video ads at least a couple of times a day, if you're an avid Internet surfer. These ads are quite similar to television commercials. They are in video format and need to be loaded and played when clicked. These are high quality videos and are very popular on video sharing websites.

Classifieds

Noticed classified ads in newspapers? Well, now just put that on a web page, and you have the same effect, just in color and a little bit more attractive. These companies too have to buy ad space on a web page, just like they do in newspapers.

Pay Per Click (PPC)
By far, the most widely used and quite effective method of online advertising is the Pay Per Click one. This system will generate and display ads that are based on what information the user has entered in the search engine. For instance, if you happen to be searching for shampoo, immediately above the search results, you'll see links taking you to a hair care website. Revenue is generated, as the name goes, per click. It can be very useful for making money, but needs to be managed rather carefully.

Floating
A rather annoying form of online advertising (and I say this only because I've experienced it myself) is a floating ad. These ads will actually 'float' over your content, or above or below it as you view the web page. They will hover until you close them. But do they get your notice? You bet!

Takeover
This type of online advertising does exactly what its name suggests. It 'takes over' the web page and consecutive pages of the same website all throughout your duration there. It begins as a huge ad on the first page, and the ad, in various sizes and forms keep reminding you about it!

Contextual Ads
The next time you enter a search phrase in your search engine and get redirected to a website, notice the ads that appear on the sides, top or bottom of the page. If they're related to what you've searched for, then the advertiser most probably uses the contextual form of advertising, which involves browsing the content and search phrases to generate relevant and related ads.

Roughly stated, these are the most popularly used types of online advertising. So, if you're looking to advertise on a website, you can decide what the most efficient way to get to your target audience is. And if you're simply browsing through, you know what form of advertising you're seeing on numerous websites!

http://www.buzzle.com/articles/types-of-online-advertising.html

Appendix 4.
Glossary

Application	a program dedicated to a specific task [e.g.: word processing, graphics etc]
ARPANET	The acronym stands for Advanced Research Projects Agency Network. ARPA of the United States Department of Defense developed ARPANET, which became the world's first packet switching network. Internet is the successor of ARPANET.
Artificial intelligence	1. a branch of computer science dealing with the simulation of intelligent behavior in computers; 2. the capability of a machine to imitate intelligent human behavior
Browser	A program that allows a user to find, view, hear, and interacts with material on the World Wide Web. Netscape Navigator and Microsoft Internet Explorer are examples of popular browsers.
Blog	A blog is basically a journal that is available on the web. The activity of updating a blog is "blogging" and someone who keeps a blog is a "blogger." Blogs are typically updated daily using software that allows people with little or no technical background to update and maintain the blog.
Cloud computing	is a general term for anything that involves delivering hosted services over the Internet. The name "cloud computing" was inspired by the cloud symbol that's often used to represent the Internet in diagrams.
Cyberspace	This term coined by William Gibson, is used to refer to the computer networks connected to each other and the content they host. It is often used to refer to the Internet.
Cyberstalking	the term refers to the use of the Internet, e-mail, or other electronic communications devices to stalk another person. Stalking generally involves harassing or threatening behavior, making harassing phone calls, leaving written messages or objects, or vandalizing a person's property.
Email Virus	It is a computer code that is transmitted through an email in the form of an attachment. The email attachment causes the destruction of some of the files on the receiver computer's hard disk and is programmatically emailed to the contacts in the address book of the receiver.

Gateway	The technical meaning is a hardware or software set-up that translates between two dissimilar protocols, for example America Online has a gateway that translates between its internal, proprietary e-mail format and Internet e-mail format. Another, sloppier meaning of gateway is to describe any mechanism for providing access to another system, e.g. AOL might be called a gateway to the Internet.
Googling	The Google search engine, being the most popularly used one, has made the word, 'google' synonymous to the concept of search engines. Searching the Internet by using the Google search engine is known as googling.
Hacking	Hacking is the activity of programmatically gaining access to a computer application that is otherwise inaccessible. The act of gaining an unauthorized access to a computer is known as hacking. Hacking of passwords that leads to breach of email privacy is a threat to communication over the Internet. Internet crime refers to all the criminal activities that are carried over the Internet.
Hardware	the mechanical and electronic parts of a computer, not the software
Host	Any computer on a network that is a repository for services available to other computers on the network. It is quite common to have one host machine provide several services, such as SMTP (email) and HTTP (web).
Home Page	The term refers to the page that is the default page of any website. It is the main page of a complex website.
Hyperlink	A reference in a document to another section of the document or to another document is termed as a hyperlink. Hyperlinks are used to redirect the user from one section of page content to another.
Hypertext	Generally, any text that contains links to other documents. Words or phrases in the document that can be chosen by a reader and which cause another document (usually a Web page) to be retrieved and displayed. A link doesn't just have to be text, however–pictures and icons can also be "clickable."
HTML	Hypertext Markup Language — The coding language used to create Hypertext documents for use on the World Wide Web. HTML looks a lot like old-fashioned typesetting code, where you surround a block of text with codes that indicate how it should appear, additionally; in HTML you can specify that a block of text, or a word, is linked to another file on the Internet. HTML files are meant to be viewed using a World Wide Web Client Program, such as Netscape or Mosaic.

HTTP	HTTP: Hypertext Transfer Protocol, abbreviated as HTTP, is a communications protocol used for the transfer of information over the Internet. A client makes an HTTP request using a web browser to which an HTTP response is sent from the server.
Icon	On a system like Windows or Macintosh that uses a graphical user interface (GUI), a small picture or symbol that represents some object or function. Examples: a file folder for a directory; a rectangle with a bent corner for a file; or a miniature illustration for a program.
Internet Chat	It is a real-time Internet chat or synchronous conferencing that is used for group communication as well as one-to-one communication over the Internet. Jarkko Oikarinen, a Ph.D. from the University of Oulu is the developer of the first Internet chat network. He developed the client and server programs for Internet Relay Chat in August 1988.
Internet Forum	It is a bulletin board that serves as a platform for group discussion. Registered users are free to contribute to the issues raised in forums thus making them open discussion platforms.
Internet Protocol Suite	It is a set of communication protocols, which are used for the Internet. Transmission Control Protocol (TCP) and Internet Protocol (IP) were the two pioneering protocols to be introduced in the Internet protocol standard. The Internet protocol suite is composed of a set of layers wherein; each layer provides a service to the upper layers in the set. The upper layers deal with abstract data while the lower layer protocols translate data into physically transmittable forms.
Internet Search Engine	It is an information retrieval system that is designed to help find information over the Internet. Search engines use algorithms to scan the huge information base of the Internet and sort it making it retrievable for the web users.
Internet Service Provider	A company, which provides users with an access to the Internet, is known as an Internet service provider or Internet access provider. ISP, as it is called, offers email accounts and other services like remote storage of files for its customers.
Intranet	A private network inside a company or organization, which uses software like that used on the Internet, but is for internal use only, and is not accessible to the public. Companies use Intranets to manage projects, provide employee information, distribute data and information, etc.

IP Address	It is a way of numerically identifying an entity on a computer network. The original addressing system known as IPv4, used 32 bit addresses. With the growth of the Internet, IPv6 came to be used wherein the addresses are composed of 128 bits. You might want to know how to find your IP address.
Mainframe	A very large computer capable of supporting hundreds of users running a variety of different programs simultaneously. Often the distinction between small mainframes and minicomputers is vague and may depend on how the machine is marketed. Example of a mainframe: the OIT-administered IBM computer that supports TSO and WYLBUR
Mail Server	It can also be called Mail Transfer Agent (MTA) and is responsible for receiving incoming email from local users and forwarding outgoing mails for delivery. A mail server application forms the heart of a messaging system that performs all the functions to keep the mails moving over the network.
Modem	A device that converts data to a form that can be transmitted by telephone etc. It modulates analog carrier signals to encode digital information and demodulates carrier signals to decode information. A cable modem provides access to data signals sent over the cable television infrastructure. Modems are commonly used for facilitating Internet access.
Motherboard	The main circuit board of a microcomputer. The motherboard contains the connectors for attaching additional boards. Typically, the motherboard contains the CPU, BIOS, memory, mass storage interfaces, serial and parallel ports, expansion slots, and all the controllers required to control standard peripheral devices, such as the display screen, keyboard, and disk drive. Collectively, all these chips that reside on the motherboard are known as the motherboard's chipset. On most PCs, it is possible to add memory chips directly to the motherboard. You may also be able to upgrade to a faster CP by replacing the CPU chip. To add additional core features, you may need to replace the motherboard entirely.
Netizen	a person who spends all his/her time in the Internet; the term is formed from the words "net"+"citizen"
Operating system	software that communicates with hardware, enabling applications to run

OSI Model	The Open System Interconnection Model is used to describe a layered communication and network protocol design of a network. It is composed of seven layers, each of which performs certain functions and provides the layers above it with some services. Go through an elaborate description of the OSI model.
Packet switching	A network technology that breaks up a message into small packets for transmission. Unlike circuit switching, which requires the establishment of a dedicated point-to-point connection, each packet in a packet-switched network contains a destination address. Thus, all packets in a single message do not have to travel the same path. As traffic conditions change, they can be dynamically routed via different paths in the network, and they can even arrive out of order. The destination computer reassembles the packets into their proper sequence. Network protocols such as IP and IPX were designed for packet-based networks.
Phishing	It is a fraudulent activity of acquiring the sensitive information by the use of a fake identity during electronic communication. It is implemented by means of emails and instant messages wherein a user is lured to enter his/her details, which are actually captured by a fraudulent website.
POP3	Short for Post Office Protocol, POP3 is an application layer Internet standard protocol. It is used to retrieve mails from a remote server. Here is a brief introduction to POP3.
PPP	Point-to-Point protocol (PPP) is a data link protocol that facilitates the establishment of a direct connection between two nodes on a network. Here is a brief introduction to the Point-to-Point-protocol.
Router	A device that determines the next network point to which a data packet should be forwarded enroute toward its destination. The router is connected to at least two networks and determines which way to send each data packet based on its current understanding of the state of the networks it is connected to. Routers create or maintain a table of the available routes and use this information to determine the best route for a given data packet.
RAM	abbreviation for random access memory [it goes away when one switches off]
Satellite Internet	Internet services that make use of the satellite communication media are termed as satellite Internet services. They are used in locations that are mobile thus making terrestrial Internet connectivity is impossible.
Search Engine	See: Internet Search Engine

Semantic Web	a term coined by Tim Berners-Lee, the man who invented the (first) World Wide Web. In essence, the Semantic Web is a place where machines can read Web pages as we humans read them, a place where search engines can better surf the Net and find what we're looking for.
Shareware	Copyrighted software available for downloading on a free, limited trial basis; if you decide to use the software, you're expected to register and pay a small fee. By doing this, you become eligible for assistance and updates from the author. Contrast to public domain software which is not copyrighted or to freeware which is copyrighted but requires no usage fee.
Spamming	The act of sending unsolicited bulk messages over an email system is known as spamming. It is an undesirable use of the electronic messaging systems.
Social media	are the platforms that enable the interactive web by engaging users to participate in, comment on and create content as means of communicating with their social graph, other users and the public.
Software	the programs, routines etc for a computer, not the hardware
Social Networking	Social networking is about building online communities of like-minded people. Serving as an excellent platform for sharing of information, social networking is a rage today.
Virus	A program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes. Most viruses can also replicate themselves and spread to other computers. All computer viruses are man made. Antivirus programs periodically check your computer system for the best-known types of viruses.
Website	A set of web pages consisting of text, audio and video, connected by hyperlinks. Web servers host websites.
WWW	It is a collection of interlinked documents that are accessible over the Internet. It consists of millions of web pages that contain text, images, voice and videos. Sir Tim Berners-Lee, a British scientist working at CERN, created the World Wide Web.
Web page	Web pages are resources of information. They are generally created in the HTML format and provide the web users with navigational abilities through hyperlinks to other web pages on the web.
Web server	is a computer program that accepts HTTP requests from web clients and provides them with HTTP responses.
Web Browser	is a software application that facilitates user interaction with the text, audio, video and other information that is located on the web.

Web 2.0	is used to describe the changes in the www technology and web design. The term deals with the idea of the development of interactivity and connectivity of the web content.
Web Crawler	Popularly known as a spider, a web crawler is a program that browses the World Wide Web in an automated manner. Search engines use the crawling technologies to index pages on the web.
Wireless Networking	It refers to computer networking that is carried out over the wireless media.
Youtuber	A person who is addicted to watching videos on the Internet is referred to as a youtuber.

Appendix 5.
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