

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

**ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ СЕМЕНА КУЗНЕЦЯ**

**Збірник текстів
та практичних завдань
з англійської мови
для студентів IV курсу галузі знань
0501 "Інформатика та обчислювальна техніка"
денної форми навчання**

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Подано навчальні матеріали та завдання для надання студентам необхідного лексичного матеріалу з теми та стимулювання розвитку навичок читання, письма й говоріння англійською мовою водночас із поглибленням знань у сфері інформаційних систем і технологій.

Рекомендовано для студентів галузі знань 0501 "Інформатика та обчислювальна техніка" денної форми навчання.

Вступ

Збірник текстів та практичних завдань з навчальної дисципліни "Іноземна мова" розроблено для студентів галузі знань 0501 "Інформатика та обчислювальна техніка" денної форми навчання.

Збірник вправ розроблено для підручника "Principals of Information Systems. A Managerial Approach", що забезпечує міжпредметний зв'язок та спрямовує студентів на розвиток фахових компетенцій з англійської мови.

Метою збірника є поглиблення знань та вдосконалення мовленнєвих навичок студентів з англійської мови у сфері інформаційних систем та технологій.

Даний збірник спрямований на збагачення й розширення активного та пасивного словника студентів шляхом засвоєння термінології за допомогою лексичних завдань, формування навичок будувати діалогічні та монологічні висловлювання, обговорення запропонованих тем та проблем.

Завдання розроблені на основі поетапного засвоєння знань, на базі якого у студентів будуть формуватися вміння висловлювати свої думки. Студенти вдосконалюватимуть навички обговорення професійних проблем на основі питань до різноманітних професійних тем, пов'язаних з тематикою курсу.

Контроль знань, вмінь та навичок студентів може здійснюватися під час виконання завдань, термінологічних диктантів та обговорення поставлених проблем.

Метою збірника є систематизація та поглиблення знань студентів у сфері інформатики та обчислювальної техніки, розвиток навичок читання, письма й говоріння англійською мовою у повсякденному житті та професійній діяльності.

Також у роботі подані завдання, які надають можливість студентам за допомогою автентичної літератури за фахом поглибити свої знання й удосконалити провідні компетенції, висвітлені в Рекомендаціях Ради Європи з мовної освіти. Основну увагу приділено завданням на розвиток та поглиблення мовленнєвих навичок студентів.

Тематику збірника обрано згідно із загальноєвропейськими вимогами щодо професійно-орієнтованого підходу до вивчення іноземної мови

у вищих навчальних закладах і відповідно до головних напрямів науково-дослідницької діяльності навчального закладу.

Збірник завдань складено згідно з вимогами кредитно-модульної організації навчального процесу у вищих навчальних закладах та узгоджено зі структурою та змістом навчальної програми з іноземної мови.

Internet and Web Applications

Task 1. Answer the following questions.

1. What advantages and drawbacks of e-mail and instant messages can you list?
2. How has e-mail changed the way people communicate?
3. What problems do businesses face using e-mail? Have they found any solutions?
4. How does the federal government try to control the illegitimate e-mail?
5. What is the general idea of instant messaging? What companies mentioned in the text offer instant messaging? Can you name other companies to continue the list?

Task 2. State whether these sentences are true (T) or false (F).

1. E-mail goes through the Internet to get to the recipient.
2. E-mail is an inefficient way of communication for time zone changes.
3. Some e-mail services include spam detection and separation.
4. Some software products can help companies, individuals, and other organizations to manage and answer bulks of e-mails.
5. There is a technology that can detect when a person's cell phone is switched off.

Task 3. Fill in the gaps with an appropriate word.

Buddy list, junk mail, spam, banned, attached, recipient's, executable, feedback, random, instantly.

1. _____ access files consist of records that can be accessed in any sequence.
2. A(n) _____ file provides additional information on this issue.
3. Clicking on links in _____ e-mail may send users to phishing web sites or sites that are hosting malware.

4. From the beginning of the Internet, sending of _____ has been prohibited, enforced by the Terms of Service/Acceptable Use Policy of internet service providers.

5. A spammer can be _____ by a moderator of the web site.

6. On *Facebook* you can use a(n) _____ to find out who of your friends is online.

7. When using ICQ program the text of the message can be seen on the screen _____ .

8. To send an e-mail you should know the _____ e-mail address.

9. Besides the _____ program, many EXE files contain other components called resources.

10. The CEO asked to send him an e-mail with _____ on matters arisen at the meeting.

Task 4. Find a word in the text that corresponds to the definition.

1. Hardware and software that connect incompatible computer networks, allowing information to be passed from one to another.

2. Chosen without regard to any characteristics.

3. Authorized, sanctioned by, or in accordance with law.

4. To show or make visible.

5. An active connection with another webpage, file, or Internet resource.

Task 5. Match the word with its definition.

| | |
|----------------------|--|
| 1 to embed | a spam |
| 2 feedback | b a method that allows two or more individuals to communicate online using the Internet |
| 3 executable program | c an argument or other persuasion used in selling |
| 4 gateway | d people online |
| 5 to access | e to attach or add |
| 6 junk or bulk mail | f information in response to an inquiry, experiment |
| 7 instant messaging | g not requested or invited |
| 8 buddy list | h to obtain or retrieve (information) from a storage device |
| 9 sales pitches | i a file containing a program that will run as soon as it is opened |
| 10 unsolicited | j a software utility that enables text messages to be sent and received over digital cellular telephone networks |

Task 6. Discuss the following points.

1. What is your preferred way to communicate with friends and mates: e-mail, telephone or text messaging? How much time do you spend talking on the phone, texting or sending e-mails?
2. Do you think an overwhelming bulk of e-mails in corporate environment can cause stress?
3. Sociologists report that most people who write "lol" do not even smile during the process. Do you think that tools of instant messaging can substitute a conversation? How often do you use emoticons? Do you find them efficient enough?
4. Spam is a plague of the 21st century. What negative influence does it have and how can it be controlled?

Free Software and Services

Task 1. Answer the following questions.

1. What advantages and drawbacks of free software and services can you list?
2. What Internet services and applications were mentioned in the text?
3. How can one use Internet cameras?
4. What social networks were mentioned in the text?
5. How can one use the Internet in emergency?

Task 2. State whether these sentences are true (T) or false (F).

1. Using a search engine, it is possible to obtain free information on any topic.
2. The information on free websites may not always be trustful.
3. Distance learning is obligatory in US colleges.
4. Employers may conduct job interviews with the help of Internet cameras.
5. Due to wireless connections you can view photos and watch movies throughout a house.

Task 3. Fill in the gaps with an appropriate word.

Social networking, wireless connection, distance learning, chat rooms, online, free of charge, search engines, instant messaging systems, download, transmitted.

1. Some web sites provide information and services _____.
2. Some _____ also mine data available in databases or open directories.

3. ICQ is one of the most popular _____ .
4. At some file hosting web sites you can _____ files for free.
5. Facebook is a _____ service launched in February 2004, owned and operated by Facebook, Inc.
6. Some examples of _____ usage include cellular phones, which are part of everyday wireless networks.
7. A modem is a device that encodes and decodes digital data _____ by a telephone or other analog communications system.
8. The first _____ offered several channels, each of which could accommodate up to five people, with messages appearing on all users' screens character-by-character as they were typed.
9. The first _____ chat system was called Talkomatic, created by Doug Brown and David R. Woolley in 1974 on the PLATO System at the University of Illinois.
10. Adult learners utilizing _____ can face obstacles such as domestic distractions and unreliable technology which could make completing a distance education course difficult.

Task 4. Find a word in the text that corresponds to the definition.

1. A price charged for some article or service; cost.
2. Mental tendency or inclination, esp an irrational preference or prejudice.
3. A teaching system consisting of video, audio, and written material designed for a person to use in studying a subject at home.
4. An optical instrument that projects an enlarged image of individual slides onto a screen or wall.
5. A person or business concern that manufactures goods or owns a factory.

Task 5. Match the word with its definition.

| | |
|--------------------|---|
| 1 to consolidate | a an agreement under which a person borrows money to buy property, esp. a house |
| 2 mortgage | b a device used for amplification of audio frequency signals in a radio, etc. |
| 3 network | c share |
| 4 stereo amplifier | d a schedule or list of items to be attended to |
| 5 agenda | e to make or become stronger or more stable |
| 6 stock | f an interconnected group or system |

Task 6. Discuss the following points.

1. Have you ever used free software or applications downloaded from the Internet? Why didn't you buy a licensed product?
2. Do you know that violating intellectual property is a crime? What kind of punishment, if any, is appropriate in this case in your opinion?
3. Can distance learning replace traditional classroom education in the nearest future? Why or why not?
4. Social networks are gaining popularity and causing people to spend more time in front of a computer instead of real socializing. Isn't it antisocial?
5. Do you have a personal page at any social network? How much time do you spend on virtual communication? Do you personally know all people who are listed as your friends?

Intranets and Extranets

Task 1. Answer the following questions.

1. What is an intranet? Which standards and infrastructure does it use?
2. What is the main intranet's virtue?
3. What does an intranet provide employees with?
4. What is an extranet? For example, what can an extranet be used for?
5. What is a virtual private network? How does it work?

Task 2. State whether these sentences are true (T) or false (F).

1. An intranet is an expensive but powerful alternative to other forms of internal communication.
2. An extranet is an ideal solution to providing information to a mobile sales force that needs access to rapidly changing information.
3. Performance must be good to provide quick response to customers and suppliers who use an extranet.
4. A rapidly growing number of companies offer limited network access to all customers and suppliers.
5. An extranet is built around Web technologies.

Task 3. Fill in the gaps with an appropriate word.

Employee, slash, response, firewall, transfer, communicate, privacy, outsourced, access, streamline.

1. User authentication and _____ are critical on an extranet so that information is protected.
2. Because Web browsers run on any type of computer, the same electronic information can be viewed by any _____ .
3. In using a VPN, a user sends data from his or her personal computer to the company's _____.
4. Employees use an intranet to gain _____ to corporate information.
5. Magazine distributors use an extranet to _____ daily sales to retail outlets.
6. VPNs _____ information by encapsulating traffic in IP packets.
7. One of an intranet's most obvious virtues is its ability to _____ the need for paper.
8. Corporations are seizing the Web as a swift way to _____ their organizations.
9. Obviously, performance must be good to provide quick _____ to customers and suppliers.
10. Companies that use a VPN from an Internet service provider have essentially _____ their networks to save money on network equipment and personnel.

Task 4. Find a word in the text that corresponds to the definition.

1. To experience something for the first time. (par. 1)
2. To send out (work, for example) to an outside provider or manufacturer in order to cut costs. (par. 5)
3. A set of related programs, located at a network gateway server, that protects the resources of a private network from users from other networks. (par. 5)
4. Synonym of important. (par. 3)
5. The ability, right, or permission to approach, enter, speak with, or use; admittance. (par.1, 2, 3, 5)

Task 5. Match the word with its definition.

| | |
|------------------|---|
| 1 infrastructure | a something handed down from the past |
| 2 virtue | b the basic structure of an organization, system, etc. |
| 3 legacy | c advantage |
| 4 outlet | d a market for a product or service |
| 5 meaningful | e important |
| 6 authentication | f to change from one thing into another |
| 7 to convert | g the process of determining whether someone or something is, in fact, who or what it is declared to be |

Task 6. Discuss the following points.

1. Nowadays more and more employees use an intranet to their benefit.
2. What would become if privacy on an extranet became not critical?
3. Intranets and extranets are something new, which older people are not familiar with.
4. If there are some problems with the Internet and the Web, intranets and extranets become useless.
5. Intranets and extranets are the sure way to total computerization.

Net Issues

Task 1. Answer the following questions.

1. What were the Internet Society and Internet Activities Board formed for?
2. What is spyware? What can it do?
3. Explain what the term "phishing" means.
4. What is cryptography? What is the difference between the plaintext and the ciphertext?
5. What is the purpose of the firewall?

Task 2. State whether these sentences are true (T) or false (F).

1. Many Internet sites are reluctant to use cookies to gather information about people who visit their sites.
2. Encryption can be used to verify who sent a message and to tell whether the message was tampered with en route.
3. Firewalls permit desired services on the outside, such as e-mail, to pass.

4. When someone searches for information about the company, he or she may find an authorized site instead.

5. A cookie has no ability to keep track of visits on the site and the actions people take.

Task 3. Fill in the gaps with appropriate words.

Signature, fraud, traffic, padlock, firewalls, hijack, decryption, cookies, unauthorized, encryption.

1. Spyware can _____ your browser, generate pop-up ads, and report your activities to someone else over the Internet.

2. A digital _____ is a technique used to meet these critical needs for processing online financial transactions.

3. _____ permit desired services on the outside, such as e-mail, to pass.

4. The growth in Internet _____ continues to be phenomenal.

5. _____ can help to prevent electronic fraud by authenticating senders' identities.

6. Many Web sites display a _____ icon at the bottom of an Internet screen to indicate that the site is encrypted.

7. The possibility of Internet _____ has prevented many people from using the Internet.

8. Many Internet sites use _____ to gather information about people who visit some Internet sites.

9. _____ converts ciphertext back into plaintext.

10. Companies can easily sue those who post _____ sites.

Task 4. Find a word in the text that corresponds to the definitions.

1. A system of computers interconnected by telephone wires or other means in order to share information (Management Issues, par. 1, 2).

2. A device designed to be launched into orbit around the earth, another planet, the sun, etc. (Service and Speed Issues, par. 3).

3. A type of malware (malicious software) installed on computers that collects information about users without their knowledge (Privacy, par. 2).

4. To break or violate (Security, par. 1).

5. A network point that acts as an entrance to another network (Security, par. 6).

Task 5. Match the word with its definition.

| | |
|-----------------|--|
| 1 prying | a the intelligible original message of a cryptogram, as opposed to the coded or enciphered version |
| 2 phishing | b offensively curious or inquisitive |
| 3 plaintext | c a type of network security attack in which the attacker takes control of a communication |
| 4 to endorse | d an e-mail fraud scam conducted for the purposes of information or identity theft |
| 5 hijacking | e to give approval of or support to, especially by public statement; sanction |
| 6 to crack down | f to halt the motion or progress |
| 7 to stall | g to take severe measures (against) |

Task 6. Discuss the following points.

1. In what way can people and companies protect themselves from unwanted and unauthorized sites?
2. Lots of people consider it great to try to breach any security measures.
3. It is getting harder and harder to protect individual privacy on the Internet.
4. How can people recognize false messages that seem to be from their Internet service providers?

Organizations and Information Systems

Task 1. Answer the following questions.

1. What types of organizations do you know? What is the difference between them?
2. Which processes do organizations establish to achieve their goals?
3. What is a value chain?
4. What is customer relationship management (CRM) designed for?
5. What is the role and functions of information systems in the organization?

Task 2. State whether these sentences are true (T) or false (F).

1. An organization is a formal collection of people and other resources established to determine a set of goals.
2. Every business organization contains a number of processes.
3. Providing products to a shareholder – customer, supplier, manager, or employee – is the primary goal of any organization.
4. CRM cannot be used to get customer feedback to help design new products and services.
5. Information systems are used by organizations to control and monitor processes to ensure effectiveness and efficiency.

Task 3. Fill in the gaps with an appropriate word.

Change, managerial businesses, personnel, downstream, management, database, developed, internal, logistics, support.

1. Because information systems are so important, _____ need to be sure that improvements or completely new systems help lower costs, increase profits, improve service, or achieve a competitive advantage.
2. Information systems _____ is the key to unlocking the potential of any new or modified system.
3. The use of information systems to add value to the organization is strongly influenced by organizational structure, culture, and _____ .
4. During the late 1960s and early 1970s, many information systems were _____ to provide reports for business decision makers.
5. Unfortunately, many of these early computer systems did not take the overall goals of the organization and _____ problem-solving styles into consideration.
6. Information systems _____ and work within all parts of an organizational process.
7. Goods and services can be output to either _____ or external systems.
8. A value chain is a series (chain) of activities that includes inbound _____ , warehouse and storage, production, finished product storage, outbound logistics, marketing and sales, and customer service.
9. It gives suppliers access to its inventory system, so the suppliers are able to monitor the _____ and automatically send another shipment when stocks are low, eliminating the need for purchase orders.

10. The management of raw materials, inbound logistics, and warehouse and storage facilities is called *upstream management*, and the management of finished product storage, outbound logistics, marketing and sales, and customer service is called _____ .

Task 4. Match the word with its definition.

| | |
|------------------------|---|
| 1 to increase | a quantity of money which has to be paid to buy something |
| 2 price | b persons who buy goods, products, and services for their own use, not for business use |
| 3 demand | c a particular type of help or work that is provided by a business to customers, but not one that involves producing goods |
| 4 consumers | d to raise, to go up |
| 5 service | e an ability or the willingness to buy a particular commodity at a given point of time |
| 6 stock | f something fed into a process with the intention of it shaping or affecting the outputs of that process |
| 7 to streamline | g to finish successfully |
| 8 to eliminate | h the capital raised by a company through the issue of shares |
| 9 to accomplish | i to completely destroy (something) so that it no longer exists |
| 10 input | j to simplify or organize a process in order to increase its efficiency |

Task 5. Find a word in the text that corresponds to the definition.

1. Money gained. (par. 1)
2. The amount or quantity of products produced by a person, factory or company in a given time. (par. 2)
3. A series of actions that produce a change or development. (par. 3)
4. A company or a person that provides a particular product. (par. 4)
5. A person or a company that sells goods one by one, not in large quantities. (par. 5)

Task 6. Discuss the following points.

1. Why is it important for an organization to continually evaluate and improve its information systems?
2. What role do information systems play in providing an organization with a competitive advantage?
3. Give some examples of using information systems in organizations. How do they operate?
4. Is it possible for organization to go without CRM? Say why.
5. What possible disadvantages of using information systems in organizations can you name?

Organizational Structure

Task 1. Answer the following questions.

1. What types of organizational structures do you know?
2. What does a hierarchical organizational structure imply?
3. What is the main trend in the traditional organizational structures today?
4. What is the difference between the team and project organizational structures?
5. What is the main disadvantage of a multidimensional organizational structure?

Task 2. State whether these sentences are true (T) or false (F).

1. The major departments are usually divided according to the number of people and can include marketing, production, information systems, finance and accounting, research and development, and so on.
2. Information systems can be a key element in empowering employees.
3. A virtual organizational structure, also called a matrix organizational structure, may incorporate several structures at the same time.
4. In the past workers got company work done at home, at a customer's location, in coffee shops, on pleasure boats, and at convenient work centers in suburbia.
5. A virtual organizational structure allows collaborative work, where managers and employees can effectively work in groups around the world.

Task 3. Fill the gaps with an appropriate word.

Shipping, flat, project, subunits, dispersing, incorporate, units, top-level, permanent, nonmanagement.

1. Traditional organizational structure is an organizational structure in which major department heads report to a president or _____ manager.

2. Employees in each group may have two bosses – a _____ boss and a functional boss.

3. Organizational _____ and the way they relate to the overall organization are called an organizational structure.

4. A simplified model of an organization shows the managerial pyramid from top-level managers to _____ employees.

5. A _____ organizational structure is an organizational structure with a reduced number of management layers.

6. A multidimensional organizational structure may _____ several structures at the same time.

7. A virtual organizational structure employs individuals, groups, or complete business _____ in geographically dispersed areas.

8. Depending on the tasks being performed, a team can be either temporary or _____ .

9. The positions or departments that are directly associated with making, packing, or _____ goods are called line positions.

10. Many companies are now _____ employees and using a virtual structure.

Task 4. Match the word with its definition.

| | |
|---------------|--|
| 1 goods | a simulated in a computer |
| 2 to produce | b a manager in a position of trust in business |
| 3 empowerment | c to manufacture raw materials into finished goods |
| 4 supervisor | d something useful and intended to be sold that comes from nature or is made in a factory |
| 5 virtual | e giving employees and their managers more responsibility and authority to make decisions, take certain actions, and have more control over their jobs |

| | |
|--------------------------|---|
| 6 subunit | f to bring to an inferior rank |
| 7 chain | g any subdivision of a larger unit |
| 8 to reduce | h to work together with others to achieve a common goal |
| 9 salesclerk | i a series of interconnected things |
| 10 to collaborate | j a person employed by a store to sell merchandise, assist customers in finding merchandise, and accepting payment |

Task 5. Find a word in the text that corresponds to the definition.

1. An arrangement of items (objects, names, values, categories, etc.) in which the items are represented as being "above," "below," or "at the same level as" one another. (par. 2)
2. A rectangular array of numbers, symbols, or expressions, arranged in rows and columns. (par. 7)
3. Characteristic of members of the armed forces. (par. 10)
4. The condition of not being threatened, especially physically, psychologically, emotionally, or financially. (par.11)
5. Of, relating to, or done by collaboration. (par.13)

Task 6. Discuss the following points.

1. Is it important to divide an organization into subunits? Say why.
2. Why do you think there are so many forms of organizational structure? What do they aim at?
3. What are advantages and disadvantages of a traditional organizational structure?
4. What form of organizational structure would you prefer? Explain why.
5. Should your boss be your "friend" or a "strict supervisor"? Give your opinion.

Organizational Culture and Change

Task 1. Answer the following questions.

1. What are the main principles of organizational culture?
2. What factors can provide an organizational change?
3. Are employees always open to any organizational changes?
4. What kinds of change do you know?
5. What is organizational learning? What can it include?

Task 2. State whether these sentences are true (T) or false (F).

1. Many European countries adopted the euro which changed how financial companies do business and how they use their information systems.
2. Employees are not usually involved in the decision to implement the change, and are not fully informed about the reasons of change and the benefits that will accrue to the organization.
3. Reengineering, also called continuous improvement, involves the radical redesign of business processes, organizational structures, information systems, and values of the organization to achieve a breakthrough in business results.
4. Reengineering challenges the fundamental assumptions governing their design but does not require finding and vigorously challenging old rules blocking major business process changes.
5. Organizational structure involves constantly improving and modifying products and services to remain competitive and to keep a strong customer base.

Task 3. Fill in the gaps with an appropriate word.

Change model, handle, corporation, improve, reliability, headquarters, alterations, time-consuming, reengineering, marketplace.

1. The major understandings and assumptions for a business, a _____ , or an organization are called organizational culture.
2. Organizational change is the responses that are necessary for for-profit and nonprofit organizations to plan for, implement, and _____ change.
3. Together, the companies can provide better coverage, improve _____ , enhance call quality, and offer a wide array of new and innovative services for consumers.
4. Organizational learning provides adaptations to new conditions or _____ of organizational practices over time.
5. _____ involves the radical redesign of business processes, organizational structure, information systems, and values of the organization to achieve a breakthrough in business results.
6. With the increased volume of securities trading in the global _____ , the Securities Industry Association has released a new model to reengineer the process for settling and clearing transactions that reduces costs and saves time.

7. All merchandising decisions are made at _____ .

8. Continuous improvement means constantly seeking ways to _____ the business processes to add value to products and services.

9. A _____ is a representation of change theories that identifies the phases of change and the best way to implement them.

10. Reengineering, however, can be disruptive, expensive, and _____ to implement.

Task 4. Match the word with its definition.

| | |
|----------------|---|
| 1 corporation | a providing of something that is needed |
| 2 supply | b an accidental wrong action or a false statement not made deliberately |
| 3 benefit | c a group of individuals, created by law or under authority of law, having a continuous existence independent of the existences of its members, and powers and liabilities distinct from those of its members |
| 4 error | d fulfillment of a need or desire |
| 5 satisfaction | e an advantage that a particular product or service has |
| 6 to affect | f a title of a chief officer or administrator, especially one who can make significant decisions on her/his own authority |
| 7 for-profit | g to influence or alter |
| 8 to overcome | h for the purpose of making money |
| 9 executive | i the act of improving; advancement or growth; promotion in desirable qualities; progress toward what is better |
| 10 improvement | j to surmount (a physical or abstract obstacle); to prevail over, to get the better of |

Task 5. Find a word in the text that corresponds to the definition.

1. One who owns stock. (par. 3)

2. To deliberately destroy or damage something in order to prevent it from being successful. (par. 5)

3. The process of ceasing old habits and creating a climate receptive to change. (par. 6)
4. Capable of competing successfully. (par. 8)
5. Extent to which time is well used or extent to which a resource is used for the intended purpose select targeted languages. (par. 10)

Task 6. Discuss the following points.

1. Think of a real organization you know and say what its organizational culture looks like. In what way does it change?
2. Why do companies need reengineering and continuous improvement?
3. What is better: to make radical changes called reengineering or gradually keep to continuous improvement? What would you prefer?
4. What practical advice can you give to a company to improve its efficiency and reduce costs?
5. If you had a chance to create your own company, what business rules would you establish?

Technology Diffusion, Infusion and Acceptance

Task 1. Answer the following questions.

1. What is technology diffusion?
2. What do some online merchants use computer systems for?
3. Which aspects does an architectural firm use computers in?
4. What factors does the technology acceptance model (TAM) specify?
5. What does it mean if companies have high level of diffusion, infusion and acceptance?

Task 2. State whether these sentences are true (T) or false (F).

1. If a company buys or develops new computerized systems, managers and employees always use them.
2. Technology diffusion is a measure of how widely technology is spread throughout an organization.
3. An organization in which computers and information systems are located in most departments and areas has a low level of technology diffusion.

4. It is impossible for a firm to have a high level of infusion in one aspect of its operations and a low level of diffusion overall.
5. Some architectural firms use computers in all aspects of designing a building or structure.

Task 3. Fill in the gaps with an appropriate word.

Acceptance, reengineering, implementation, extent, The Technology Acceptance Model (TAM), diffusion, technology, purchasing, infusion, potential.

1. Such an online merchant as Amazon.com has a high level of .
2. _____ of diffusion differs from the classic definition of diffusion because it measures diffusion within an organization, the extent to which use spreads across the people in an organization.
3. Infusion has been defined as "the extent to which the full _____ of the innovation has been embedded within an organization's operational or managerial work systems.
4. The technology acceptance model specifies the factors which can lead to higher _____ and usage of technology in an organization.
5. Companies hope that a high level of diffusion, _____, and acceptance will lead to greater profitability.
6. Technology diffusion is a measure of how widely _____ is spread throughout an organization.
7. To be effective, must _____ be used throughout a company.
8. Some online merchants use computer systems to perform marketing and billing _____ .
9. _____ suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it.
10. TAM focuses on the individual "user" of a computer, with the concept of "perceived usefulness", and ignores the essentially social processes of Information Systems development and _____ .

Task 4. Find a word in the text that corresponds to the definition.

1. The spreading of something more widely. (par. 1)
2. The introduction of a new element or quality into something. (par. 1)
3. The restructuring of a company or part of its operations, esp. by utilizing information technology. (par. 1)

4. The action of consenting to receive or undertake something offered. (par. 2)
5. The capacity or potential of a project or an organization to get money. (par. 2)

Task 5. Match the word with its definition.

| | |
|-----------------------------|--|
| 1 information system | a the introduction of a new element or quality into something |
| 2 diffusion | b implant (an idea or feeling) so that it becomes ingrained within a particular context |
| 3 infusion | c the application of scientific knowledge for practical purposes, especially in industry |
| 4 technology | d the spreading of something more widely |
| 5 measure | e a person or company involved in wholesale trade, especially one dealing with foreign countries or supplying goods to a particular trade |
| 6 extent | f an information system theory that models how users come to accept and use a technology |
| 7 merchant | g a task or operation seen in terms of how successfully it is done |
| 8 to imbed | h the area covered by something |
| 9 performance | i a computerized system designed to support a company or organization |
| 10 TAM | j an indication of the degree, extent, or quality of something |

Task 6. Discuss the following points.

1. What should an organization do to be effective?
2. Give some examples of online merchants with a high level of diffusion.
3. What is the difference between diffusion and infusion?
4. How can an organization use the information systems to their full potential?
5. How can a high level of diffusion and infusion lead to greater performance and profitability?

Total Quality Management

Task 1. Answer the following questions.

1. What product can be considered as a high-quality one?
2. How will a high-quality product satisfy customers?
3. How is quality often achieved?
4. What did Cardinal Health do to reduce errors?
5. Why have some companies adopted continuous improvement strategies?

Task 2. State whether these sentences are true (T) or false (F).

1. Total quality management (TQM) consists of a collection of approaches, tools, and techniques.
2. According to the report by the National Institute of Medicine, drug errors occur more than 17 percent of the time.
3. Industries never use six sigma.
4. The definition of the term "quality" has evolved over the years.
5. Customers don't expect good support after the sale.

Task 3. Fill in the gaps with an appropriate word.

Customer, to improve, implementing, product, investment, quality, approach, Six Sigma, software, expectations.

1. Total Quality Management or TQM is an integrative philosophy of management for continuously improving the _____ of products and processes.
2. TQM requires the involvement of management, suppliers, and customers in order to meet or exceed customer _____.
3. The _____ management strategy originated in 1986.
4. Total Quality Management (TQM) is a management approach to long-term success through satisfaction.
5. TQM is a long-term _____ , and it is designed to help you find long-term success.
6. Before looking for any kind of quality management _____ , it is important to make sure you are capable of implementing these fundamental principles throughout the company.
7. Six Sigma is a disciplined, data-driven _____ and methodology for eliminating defects.

8. Six Sigma Consultants all over the world have developed proprietary methodologies for _____ Six Sigma quality.

9. Consumers may focus on the specification quality of a _____ .

10. Many different techniques and concepts have evolved _____ product or service quality.

Task 4. Find a word in the text that corresponds to the definition.

1. Compliance with standards, rules. (par. 1)
2. Make excessive demands on. (par. 1)
3. A thing that makes something better or is better than something else. (par 2)
4. Combine with another to form a whole. (par. 5)
5. Seek to attain or accomplish (a goal) over a long period. (par. 5)

Task 5. Match the words with their definitions.

| | |
|------------------|--|
| 1 help-desk | a a way of dealing with a situation or a problem |
| 2 tool | b make smaller or less in amount, degree, or size |
| 3 approach | c a service providing information and support to computer users, especially within a company |
| 4 distribution | d a thing used to help perform a job |
| 5 to reduce | e the action or process of supplying goods to retailers |
| 6 to adhere | f make (something) on a large scale using machinery |
| 7 to manufacture | g closely follow, observe, or represent |

Task 6. Discuss the following points.

1. What do you expect from a high-quality product?
2. Are you ready to pay more for high-quality goods?
3. What must be taken into account when a company wants to design a new product?
4. After the design, including the manufacturing drawings, has been reviewed and finalized, it is time to plan for manufacture. Which steps will be included?
5. What is the role of information systems in business processes?

Outsourcing, On-demand Computing and Downsizing. Organizations in a Global Society

Task 1. Answer the following questions.

1. How are organizations trying to control costs nowadays?
2. What is outsourcing?
3. Why do organizations outsource a process?
4. What does downsizing involve?
5. Are there any challenges to operating in a global society?

Task 2. State whether these sentences are true (T) or false (F).

1. Strategies to contain costs are outsourcing, on-demand computing, and downsizing.
2. A computer company can outsource the manufacturing of its personal computers and waste hundreds of millions of dollars.
3. On-demand computing is an extension of the outsourcing approach.
4. A number of companies have lost their money because of using on-demanding computing.
5. Not many organizations operate in global society nowadays.

Task 3. Fill in the gaps with an appropriate word.

Organizations, outsourcing, shareholders, application, suppliers, support, offshore, reduction, expenses, flexibility, downsizing, employees.

1. In the early 21st century businesses increasingly outsourced to _____ outside their own country.
2. Outsourcing can offer greater budget _____ and control.
3. _____ lets organizations pay for only the services they need, when they need them.
4. Outsourcing reduces the need to hire and train specialized staff, brings in fresh engineering expertise, and reduces capital and operating _____.
5. The most common reasons why companies decide to outsource include cost _____ and cost savings.
6. When companies _____ services, even though it may not be the core parts of the business, those jobs leave the home country for foreign countries.

7. _____ refers to the permanent reduction of a company's workforce and is generally associated with corporate reorganization.

8. Downsizing is a controversial corporate practice that receives _____ and even praise from executives, _____, and some economists, and criticism from _____, unions, and community activists.

9. On-demand computing (ODC) provides an infrastructural solution to the needs of modern_____.

10. A common _____ of on-demand computing might be found in a hospital environment or in very large organizations.

Task 4. Find a word in the text that corresponds to the definition.

1. The activity or condition of striving to gain or win something by defeating or establishing superiority over others.

2. Made, situated, or registered abroad, especially in order to take advantage of lower taxes or costs or less stringent regulation.

3. The technology of sending signals and messages over long distances using electronic equipment, for example by radio and telephone.

4. Reduce the size of (a company or organization) by shedding staff.

5. A task or situation that tests someone's abilities.

Task 5. Match the words with their definitions.

| | |
|---------------|--|
| 1 advantage | a the total amount of wages paid by a company |
| 2 competitive | b a condition or circumstance that puts one in a favorable or superior position |
| 3 buyout | c keep (something) at the same level or rate |
| 4 procurement | d having or displaying a strong desire to be more successful than others |
| 5 support | e the purchase of a controlling share in a company, especially by its own managers |
| 6 to maintain | f the action or occupation of acquiring supplies |
| 7 payroll | g technical help given to the user of a computer or other product |

Task 6. Discuss the following points.

1. What reasons for outsourcing do you know?
2. A growing number of organizations are finding that outsourcing does not necessarily lead to reduced costs.
3. Why is work going offshore? What industry is leading the offshoring wave?
4. Is there any difference between downsizing and rightsizing?
5. There are many challenges to operating in a global society. Give some examples of possible challenges.

Competitive Advantage

Task 1. Answer the following questions.

1. What is competitive advantage?
2. What factors lead firms to seek competitive advantage?
3. Who suggested the competitive force model?
4. What characteristics should a company obtain to be competitive?
5. What are three main strategies to attain competitive advantage?

Task 2. State whether these sentences are true (T) or false (F).

1. Michael Porter, a famous businessman, suggested the competitive forces model.
2. The five forces include rivalry among existing companies, the threat of new entrants, the threat of substitute products and services, bargaining power of buyers, and using information systems.
3. The more consumers are able to obtain similar products and services that satisfy their needs, the more likely firms are to try to establish competitive advantage.
4. The resource-based view is one of the components of the five-force model.
5. When the threat of new market entrants is high, the desire to seek competitive advantage is low.
6. If an organization does not introduce new products and services every few months, it can quickly stagnate, lose market share, and decline.
7. Very often the competitive advantage a firm gains with a new information system is only temporary, competitors are quick to copy a good idea.

8. A strategic partnership is an agreement with the help of which companies can gain competitive advantage more successfully.
9. The extent to which companies are using computers and information technology for competitive advantage continues to grow.
10. Suppliers can help an organization to obtain competitive advantage.

Task 3. Fill in the gaps with an appropriate word.

To accomplish, competitive advantage, resource-based view, highly competitive, to exert, rivalry, entrants, competitive, information technology, altering.

1. _____ is defined as the strategic advantage one business entity has over its rival entities within its competitive industry.
2. _____ this move companies should follow the five-forces model suggested by Porter.
3. The _____ among existing competitors is an important factor that leads firms to seek competitive advantage.
4. The _____ is an approach to acquiring and controlling assets or resources that can help the company to achieve competitive advantage.
5. Typically, _____ industries are characterized by high fixed costs of entering or leaving the industry, low degrees of product differentiation, and many competitors.
6. The threat of new _____ is another important force leading an organization to seek competitive advantage.
7. Large buyers tend _____ significant influence on a firm. This influence can be diminished if the buyers are unable to use the threat of going elsewhere.
8. To be _____, a company must be fast, nimble, flexible, innovative, productive, economical and customer oriented.
9. _____ industry structure is the process of changing the industry to become more favorable to the company or organization.
10. The extent to which companies are using computers and _____ for competitive advantage continues to grow.

Task 4. Find a word in the text that corresponds to the definition.

1. The possibility that something very bad will happen. (par.1)
2. A situation in which two or more people, teams, or companies are competing for something, especially over a long period of time, and the feeling of competition between them. (par. 2)

3. Someone who takes part in a competition. (par. 3)
4. Someone who buys and uses products and services. (par. 4)
5. The power to affect the way someone or something develops, behaves, or thinks without using direct force or orders. (par. 5)

Task 5. Match the words with their definitions.

| | |
|----------------------|--|
| 1 available | a a person, group, or organization that you compete with in sport, business, a fight etc. |
| 2 rival | b how large, important, or serious something is, especially something such as a problem or injury |
| 3 marketplace | c to change, or to make someone or something change |
| 4 extent | d is able to be used or can easily be bought or found |
| 5 alter | e the part of business activity that is concerned with buying and selling goods in competition with other companies |

Task 6. Choose the best appropriate word for each sentence.

1. With rental costs for office increasing, the _____ use of space is an issue for every firm.

- a** sensible **b** efficient **c** capable **d** professional

2. Sending information electronically has many benefits, but company e-mail systems are often used inappropriately. You should not _____ your company's time and money by sending your e-mail copies to everyone.

- a** miss **b** waste **c** lose **d** pass

3. Expanding into _____ markets involves decisions about which markets to enter into and the best way to do business in each market.

- a** home **b** abroad **c** outside **d** foreign

4. We _____ for businesses that have good team of managers.

- a** look **b** ask **c** request **d** seek

5. There are many _____ you can use to motivate people.

- a** incentives **b** goals **c** inspirations **d** persuasions

Task 7. Discuss the following points.

1. Do you think competitive advantage is important? Why?
2. What characteristics in your opinion should a company have to be competitive?
3. Is it important to have a proper strategy to be successful in business? Why?
4. How does creating new products and services influence the competitiveness of a company?
5. If you had your own business what measures would you take to be competitive?

Performance-Based Information Systems

Task 1. Answer the following questions.

1. What are performance-based information systems?
2. Why do organizations use performance-based information systems?
3. How many stages do businesses pass through in their use of information systems? What are they?
4. What's productivity? What does lower productivity mean?
5. What factors is productivity based on?
6. What does return on investment (ROI) investigate?
7. What are the measures of performance? Why do companies use them?
8. What is earnings growth or the increase in profit?
9. What is market share?
10. What is speed to market (STM)?
11. What is customer satisfaction?
12. What is total cost of ownership (TCO)?

Task 2. State whether these sentences are true (T) or false (F).

1. In the first stage, organizations focused on using information systems to reduce productivity.
2. The second stage was oriented towards gaining competitive advantage.
3. Today, companies are shifting from performance-based management to strategic management of their information systems.
4. Companies use different measures of performance to evaluate the contributions their information systems make to their business.

5. Ignoring the revenue potential is a key element for most organizations.
6. The numbers assigned to productivity levels are always based on labor hours.
7. Keeping electronic medical records (EMRs) will reduce healthcare costs.
8. Half of Canadian productivity gains were caused by improvements in customer response.
9. Another measure of IS value is the earnings growth.
10. A higher level of output for a given level of input means higher productivity.
11. Improved productivity can result in lower costs.
12. Because of the importance of ROI, many computer companies provide ROI calculators to potential customers.
13. The goal of most hedge funds is to maximize return on investment.
14. Hitachi uses STM to promote its projectors to businesses and individuals.

Task 3. Fill in the gaps with an appropriate word.

Revenue potential, computerized databases, improvements, hedging, productivity, objective, output, ROI calculators, drops, resulting quality, information system, measures, customer, strategic advantage.

1. In the first stage, companies generally ignored the_____.
2. In the third stage, companies carefully consider both _____ and costs.
3. Companies use _____ to evaluate the contributions their information systems make to their business.
4. A higher level of _____ for a given level of input means lower productivity.
5. Keeping electronic medical records (EMRs) on _____ will increase the productivity of healthcare professionals.
6. A company can take corrective action if productivity _____ below certain levels.
7. Productivity can be based on_____.
8. An _____ can monitor and compare a basic level of productivity over time.

9. Companies use different _____ of performance to evaluate the contributions their information systems make to their business.

10. Improved productivity can result in faster _____ response.

11. Half of the country's productivity gains were caused by _____ in equipment and machinery.

12. _____ can be used to estimate returns.

13. Speed can also be a critical performance _____ for many organizations.

14. _____ is actually the practice of attempting to reduce risk.

Task 4. Match the words with their definitions.

| | |
|---|--|
| 1 costs | a has identified five competitive forces that shape every industry and every market |
| 2 revenues | b a digital version of the traditional paper-based medical record for an individual. It represents a medical record within a single facility, such as a doctor's office or a clinic |
| 3 a hedge fund | c the value of money that has been used up to produce something, and hence is not available for use anymore |
| 4 the National E-prescribing Patient Safety Initiative (NEPSI) | d is a measure of the efficiency of production. It is a ratio of production output to what is required to produce it (inputs). Its measure is defined as a total output per one unit of a total input |
| 5 market share | e a joint project of dedicated organizations that each play a unique role in resolving the current crisis in preventable medication errors |
| 6 porter | f integrates existing financial, operations and other data into eye-opening and actionable facts |
| 7 strategic management | g compares the value of a dollar today to the value of that same dollar in the future, taking inflation and returns into account |
| 8 speed to market (STM) | h the amount of money that a company actually receives during a specific period, including discounts and deductions for returned merchandise |

| | |
|---|--|
| 9 performance-based management (PBM) | i a key indicator for measuring a company's success and the driving force behind stock price appreciation |
| 10 productivity | j an enterprise that contributes goods or services in a supply chain |
| 11 return on investment (ROI) | k analyzes the major initiatives taken by a company's top management on behalf of owners, involving resources and performance in external environments |
| 12 net present value (NPV) | l a system of education, concepts, tools, and practices that are necessary to manage an order-driven business in such a way that its performance and profitability continue to improve |
| 13 earnings growth/ increase in profit | m a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments |
| 14 output | n the percentage of an industry or market's total sales that is earned by a particular company over a specified time period |
| 15 electronic medical records (EMRs) | o a party that receives or consumes products (goods or services) and has the ability to choose between different products and suppliers |
| 16 vendor | p an investment fund that can undertake a wider range of investment and trading activities than other funds, but which is generally only open to certain types of investors specified by regulators |
| 17 customer | q is the total cost of a computer asset throughout its lifecycle, from acquisition to disposal |
| 18 institutional investor | r anon-bank person or organization that trades securities in large enough share quantities or dollar amounts that they qualify for preferential treatment and lower commissions |
| 19 customer satisfaction | s measures how well a company's products or services meet or exceed customer expectations |
| 20 total cost of ownership (TCO) | t the amount of goods and services by a firm, industry, or country |

Task 5. Discuss the following points.

1. Why are information systems so important in business today? Think of the ways that information technology can improve productivity & performance.
2. What performance measures can you suggest and why do companies need them?
3. What does performance-based management mean? Compare traditional and performance-based management.
4. "Speed to market is one benefit that will sway even the most reluctant developers that cloud the way to go," said Steven Sadoff, executive vice president, chief information officer, at Knight Capital. Comment on this.
5. How to measure consumer awareness? Why is customer satisfaction so important? Conduct a customer satisfaction survey.

Careers in Information Systems

Task 1. Answer the following questions.

1. Why have many jobs been lost in U.S.?
2. Why are many companies joining with colleges and universities?
3. What do IS workers seek in addition to salary?
4. What makes easier to export IS jobs to other countries?
5. What is the aim of using autonomies?
6. What is the primary function of a system operator?
7. What does the systems development component of a typical IS department focus on?
8. What do the systems analysts do?
9. What is the key to get most from any information system?
10. What is an information service unit?

Task 2. State whether these sentences are true (T) or false (F).

1. Numerous schools have degree programs with information systems, computer information systems and management information systems.
2. Online job listings for IS positions decreased in 2003.
3. Nowadays companies are looking for IS talent.
4. Opportunities in information systems are confined to single countries.
5. The Internet makes it easier to export IS jobs to other countries.

6. Data-entry operators convert data into a form the computer can use.
7. In large businesses one or more people may manage information resources with the help of outsourcing.
8. IS hardware and software are cheap.
9. An information center provides users with assistance, training, application development, etc.
10. Keeping corporate Web sites accurate and current doesn't require substantial resources.

Task 3. Fill in the gaps with an appropriate word.

Goal, capabilities, communication skills, salaries, computing, organization, information systems (IS), re-engineering, information, information technology.

1. _____ are concerned with the information that computer systems can provide to aid a company in defining and achieving its goals.
2. Information Systems graduates are problem-solvers with excellent _____ and can be employed as network engineers, software engineers, network administrators, etc.
3. Careers in IT (information technology) and IS (information systems) offer some of the highest post-undergraduate starting _____ .
4. Information systems are focused upon processing _____ within organizations, especially within business enterprises, and sharing the benefits with modern society.
5. Information systems managers work in every size of _____ in the industry and the service sector, usually with a staff of technicians, programmers and database administrators reporting to them.
6. Companies going through business process _____ may well look to the information systems manager to deal with change management.
7. Business process re-engineering entails re-designing the way work is done so that the organization's _____ is met and costs are reduced
8. The Bureau of Labor Statistics has listed health _____ as one of the 20 fastest growing occupations in the United States.
9. There are numerous creative, fun, and interesting jobs and careers in _____ fields.
10. Computing requires and develops _____ in solving deep, multidimensional problems requiring imagination and sensitivity to a variety of concerns.

Task 4. Find a word in the text that corresponds to the definition.

1. Very exciting, shocking, or strange. (par. 3)
2. When a company uses workers from outside the company to do a job. ("Roles, Functions, and Careers in the IS Department", par.1)
3. Computer machinery and equipment, as opposed to the programs that make computers work. ("Operations")
4. A computer system in a company that allows better communication between the company and its customers by combining Internet and intranet systems. ("Support Development")
5. The act of getting land, power, money etc. ("Support")

Task 5. Match the word with its definition.

| | |
|-----------------------------|---|
| 1 information system | a the process of gradually becoming bigger, better, stronger, or more advanced |
| 2 perspective | b a piece of work that is given to someone as part of their job |
| 3 development | c the application of scientific knowledge for practical purposes, especially in industry |
| 4 technology | d a way of thinking about something, especially one which is influenced by the type of person you are or by your experiences |
| 5 network | e computer software which asks you a series of questions to try to find the cause of a computer problem, and suggests possible solutions |
| 6 maintenance | f a large amount of data stored in a computer system so that you can find and use it easily |
| 7 troubleshooting | g a task or operation seen in terms of how successfully it is done |
| 8 assignment | h the repairs, painting etc that are necessary to keep something in good condition |
| 9 performance | i a computerized system designed to support the activities of company or organizational management |
| 10 database | j a system of lines, tubes, wires, roads etc. that cross each other and are connected to each other |

Task 6. Fill in the gaps with the correct word

Management Information Systems (MIS) is the (1)_____ of people, technology, and organizations. If you enjoy technology like iPhones, iPods, and Facebook, you have what it takes to major in information systems. All you need is an interest in technology and the desire to use technology (2)_____ people's lives. Many people think that MIS is all programming. However, programming is just a small part of our curriculum and there are many jobs in MIS where you do not program.

Everyone who works in business, from someone who pays the bills to the person who hires and fires, uses information systems. For example, a supermarket could use a computer database to keep track of which products sell best. And a music store could (3)_____ a database to sell CDs over the Internet.

Information isn't worth much if it doesn't serve a (4)_____. MIS students learn how businesses use information to improve the company's operations. Students also learn how to manage various information systems so that they best (5)_____ the needs of managers, staff and customers.

1. a) *science*; b) *study*; c) *research*.
2. a) *to refine*; b) *to develop*; c) *to improve*.
3. a) *to utilize*; b) *to employ*; c) *to use*.
4. a) *purpose*; b) *intention*; c) *objective*.
5. a) *fit*; b) *serve*; c) *satisfy*.

Task 7. Discuss the following points.

1. What careers in Information Systems do you know?
2. How do you understand the expression "job-hunting strategies"?
Think of the examples.
3. Why has demand for IS professionals grown in nonprofit organizations and in the government?
4. What can make IS professionals' work easier?
5. Describe the situation with L-1 visa program.
6. What do you know about outsourcing? Why is it popular with larger organizations?
7. How can training be provided?
8. What do you know about Web administration?
9. What is the role of a systems analyst?
10. What are Internet developers responsible for?

Typical IS Titles and Functions

Task 1. Answer the following questions.

1. What is the role of the CIO?
2. What do LAN administrators do?
3. What does the dot-gone era mean?
4. Give a definition of certification.
5. What is one of the greatest fears of every IS manager?
6. Name all IS careers you know.

Task 2. State whether these sentences are true (T) or false (F).

1. The CIO is responsible for the corporate-wide policy making, planning, management and acquisition of information systems.
2. The CIO works under the chief technology officer.
3. Internet jobs within a traditional company include administrators, developers, programmers and site operators.
4. There are a number of certification programs.
5. Despite the increase in attacks on computers, there are no new careers in fraud detection.

Task 3. Fill in the gaps with an appropriate word.

Career, job, fraud, websites, developers, career planning, administrators, certificate, responsible, salaries

1. The growth of the web over the last couple of decades has brought with it some new ___ titles.
2. Graphic designers are often responsible for the way _____ look and are often referred to as web designers.
3. Web _____ tend to the technical aspects of creating websites.
4. Web masters are also called web _____ .
5. Employers usually require those they hire to have an associate degree or _____ but a bachelor's degree in a computer-related major may be needed for more advanced positions.
6. Writers and editors are _____ for producing the written content on websites.
7. Some website writers are employed full time and therefore earn _____ .

8. _____ development is influenced by several factors and their interaction with one another.

9. _____ is a multi-step process that involves learning enough about yourself and the occupations which you are considering in order to make an informed decision.

10. Insurance _____ has existed ever since the beginning of insurance as a commercial enterprise.

Task 4. Find a word in the text that corresponds to the definition.

1. A planned series of actions for achieving something ("The Chief Information Office").

2. A science which involves developing and making extremely small but very powerful machines ("The Chief Information Officer", par.2).

3. An occasion when an employer ends a worker's employment for a temporary period of time because there is not enough work ("Internet Careers", par.1).

4. A chance to do something or an occasion when it is easy for you to do something ("Internet Careers", par.3).

5. A dishonest person or a criminal ("Other IS Careers", par.2).

Task 5. Match the word with its definitions.

| | |
|------------------------|---|
| 1 certification | a a way of dealing with a situation or problem |
| 2 authority | b make smaller or less in amount, degree or size |
| 3 approach | c the process of giving someone or something an official document that says they are allowed to do a certain job, that something is of good quality etc. |
| 4 policy | d the power you have because of your official position |
| 5 to reduce | e a way of doing something that has been officially agreed and chosen by a political party, business, or other organization |
| 6 safeguarding | f using a system in which information is recorded or sent out electronically in the form of numbers, usually ones and zeros |
| 7 digital | g a rule, agreement etc that is intended to protect someone or something from possible dangers or problems |

Task 6. Choose the best appropriate word for each sentence.

While some people start out on eBay selling treasures found in their attic or while cleaning out closets, they soon catch the bug to build their own online store. What you (1)____ depends on your special interests and areas of (2)____ . Success stories about eBay (3)_____ involving retirees are plentiful and promising, whether you choose to specialize in country antiques or garage sale collectibles, buying excess inventory from local warehouses, or selling refurbished machinery to other countries. Getting started is as easy as visiting eBay's Seller Information Center to learn about the sales approach that works for you.

If you love crafts and making things, etsy.com offers an excellent way to find buyers for your creative wares, as long as they are handmade or vintage. If painting, jewelry, textiles, or pottery is your (4)_____ , you'll find tools and workshops on the site to help you make the most of this online (5)_____ .

- | | | |
|--------------------------|-----------------------|---------------------------|
| 1. a) <i>sell</i> ; | b) <i>trade</i> ; | c) <i>advertise</i> . |
| 2. a) <i>skill</i> ; | b) <i>expertise</i> ; | c) <i>competence</i> . |
| 3. a) <i>employers</i> ; | b) <i>managers</i> ; | c) <i>entrepreneurs</i> . |
| 4. a) <i>passion</i> ; | b) <i>emotion</i> ; | c) <i>outburst</i> . |
| 5. a) <i>shop</i> ; | b) <i>selling</i> ; | c) <i>marketplace</i> . |

Task 7. Discuss the following points.

1. What type of problems can LAN administrators solve?
2. What companies that offer goods and services over the Internet do you know?
3. Who is a job-hunter?
4. What does certification involve?
5. What do you know about insurance fraud?

An Overview of Artificial Intelligence

Task 1. Answer the following questions.

1. Why are many companies designing computer programs?
2. What is referred to as artificial intelligence, or AI?
3. Why is fraud detection one area in which AI is paying off?
4. Why aren't fraud-detection techniques publicized?

5. How does Amazon's new AI fraud-detection system work?
6. What are the benefits of AI applications?
7. Why is it necessary to learn about Specialized Information Systems?

Task 2. State whether these sentences are true (T) or false (F).

1. Effective computer programs need to be able to think and interpret trends in the data as a human being would – but much, much faster.
2. Since most online transactions are paid for with credit cards, detecting and preventing credit card fraud has become a priority for governments.
3. The system developed for Amazon uses advanced AI techniques to analyze each transaction.
4. Since fraudsters follow different patterns of behavior, it makes it easier to detect fraud.
5. AI systems are taking over many tedious and dangerous human tasks.

Task 3. Fill in the gaps with an appropriate word.

Data, applications, specialized systems, virtual reality, techniques, electronics, neural network, fraud, transactions, AI.

1. Credit card _____ is a serious concern for Internet retailers.
2. The company is happy to disclose the effectiveness of its new _____ fraud-detection system.
3. Many companies are designing computer programs to automate the management and interpretation of _____ .
4. Analyzing large amounts of data to turn up useful and valuable information is one of the many _____ of AI.
5. The overall goal of the _____ is to help individuals and organizations achieve their goals.
6. Young stock traders may use a special system called a _____ to uncover patterns and make millions of dollars trading stocks and stock options.
7. The anonymous _____ occurring on the Internet are drawing criminals of all ranks, from one-time hackers to organized crime, which tests the market's boundaries.
8. The system developed for Amazon uses classic AI _____ to analyze each transaction.

9. Fraudsters tend to purchase goods – such as _____ – that they can dispose of easily.

10. Specialized Information Systems include expert systems, robotics, vision systems, natural language processing, learning systems, neural networks, _____, and other systems.

Task 4. Find a word in the text that corresponds to the definition.

1. The ability of computers to mimic or duplicate the functions of the human brain.
2. Piece of business.
3. Interconnecting system.
4. Piece of dishonesty.
5. Information processed or stored by a computer.

Task 5. Match the word with its definition.

| | |
|-------------------|---|
| 1 technique | a discovery of dishonesty |
| 2 fraud detection | b technology dealing with the design, construction, and operation of robots in automation |
| 3 robotics | c an artificial environment which is experienced through sensory stimuli (as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment |
| 4 virtual reality | d a usually large collection of data organized especially for rapid search and retrieval (as by a computer) |
| 5 database | e a skilled way of doing something |

Task 6. Choose the best appropriate word for each sentence.

Fraud-detection techniques are not typically (1)_____ – the less people know about them, the more (2)_____ they are. Even Amazon won't fully disclose the (3)_____ of its AI system. The company is happy to disclose, however, the effectiveness of its new AI fraud-detection system. The new system greatly reduced the cases of (4)_____ at Amazon. In the first six months of the system's use, fraud (5)_____ were halved.

1. a) advertised; b) publicized; c) announced; d) informed.
2. a) useful; b) beneficial; c) effective; d) profitable.
3. a) data; b) information; c) patterns; d) details.
4. a) fraud; b) crime; c) felony; d) infringement.
5. a) indices; b) figures; c) rates; d) numbers.

Task 7. Discuss the following points.

1. Artificial intelligence and its benefits.
2. The purpose of fraud-detection techniques.
3. Useful applications of AI.
4. The use of Specialized Information Systems in business.
5. The role of Information Systems in the Global Economy.

Robotics. Vision System. Natural Language Processing

Task 1. Answer the following questions.

1. What is robotics? What is it used for?
2. How can robotics facilitate our lives?
3. What can vision systems be used for?
4. Is natural language processing useful in modern society? Why or why not?

Task 2. State whether these sentences are true (T) or false (F).

1. To approach human intelligence, a robot must work at about 10 million instructions per second.
2. The technology used in some robots may help people with disabilities.
3. In perspective robots will be widely applied in different areas.
4. Robots with vision systems have color and three-dimensional vision.
5. A natural language processing system retrieves data without commands and key words.

Task 3. Fill in the gaps with an appropriate word.

Image sensors, text input, controlling software, vision perception, robotics, natural language text, flexible communication, electronic signals, high-precision, automation.

1. Computers and robots were expected to allow complete _____ of manufacturing processes.
2. Powerful artificial intelligence software helps to fully develop the _____ machine capabilities of robots.
3. Advances in speech understanding and natural language processing allow _____ with human users.
4. _____ involves mechanical, usually computer-controlled, devices to perform tasks that require extreme precision.

5. Most computer vision systems rely on _____ , which detect electromagnetic radiation.

6. Modern robotics integrates both high-precision machine capabilities and _____ .

7. NLP explores how computers can be used to understand and manipulate _____ or speech.

8. Robot sensors measure robot condition and its environment and send such information to robot controller as _____ .

9. Automatic text processing systems take form of _____ and transform it into an output .

10. Computer vision automates and integrates a wide range of processes and representations for _____ .

Task 4. Find a word in the text that corresponds to the definition.

1. The logic circuitry that responds to the basic instructions that drive a computer.

2. Computer systems able to perform tasks that normally require human behavior.

3. A specific instruction given to a computer application.

4. An instrument that converts sound waves into an electric current, usually fed into an amplifier.

5. A computer input device in the form of a small panel sensitized to finger movement or pressure.

Task 5. Match the word with its definition.

| | |
|----------------------------|---|
| 1 voice recognition | a the field of miniature robotics, in particular mobile robots with characteristic dimensions less than 1 mm |
| 2 robotics | b various kinds of programs used to operate computers and related devices |
| 3 sensor | c a human written or spoken language as opposed to a computer language |
| 4 microrobotics | d a program for the retrieval of data, files, or documents from a database or network, esp. the Internet |
| 5 natural language | e the ability of a machine or program to receive and interpret dictation, or to understand and carry out spoken commands |

| | |
|------------------------|---|
| 6 computer code | f a mechanical device sensitive to light, temperature, radiation level, that transmits a signal to a measuring or control instrument |
| 7 search engine | g the symbolic arrangement of data or instructions in a computer program or the set of such instructions |
| 8 software | h a branch of engineering that involves the conception, design, manufacture, and operation of robots |

Task 6. Discuss the following points.

1. What do you think the world will be like a hundred years from now? Will robots become an integral part of our life? Why or why not?
2. What kind of opportunities do vision systems offer? Give an example of its practical application.
3. How can the natural language processing system help people with disabilities?

Learning Systems. Neural Networks. Other Artificial Intelligence Applications

Task 1. Answer the following questions.

1. How do learning systems work?
2. What is the function of a neural network?
3. What other AI applications do you know?

Task 2. State whether these sentences are true (T) or false (F).

1. Learning systems software requires feedback on the results of actions and decisions in order to show whether they are desirable or not.
2. A neural network is a computer system that can simulate the functioning of a human brain, but can hardly predict human behavior.
3. Neural networks are able to solve complex problems very quickly if all the information is available.
4. Genetic algorithms are used only to make better decisions in developing inputs to neural networks.
5. An intelligent agent consists of a knowledge base which is used to accommodate user preferences.

Task 3. Fill in the gaps with an appropriate word.

Intelligent agents, collaborative approach, pattern processors, adaptive system, artificial neurons, intelligent decisions, parallel architecture, genetic algorithms, neural network, problem-solving.

1. Machine learning research designs algorithms that recognize complex patterns and make _____ .
2. Some learning systems attempt to adopt a _____ between human and machine.
3. The components of an artificial _____ are an attempt to recreate the computing potential of the brain.
4. Neural networks are, by design, _____ – they can identify trends and important features, even in relatively complex information.
5. The artificial neural networks are made of interconnecting _____ which may share some properties of biological neural networks.
6. Artificial neural network is an _____ that changes its structure based on external or internal information.
7. The neural networks are based on the _____ of biological brains.
8. Genetic algorithms provide computers with a method of _____ which is based upon implementations of evolutionary processes.
9. _____ are best suited for those tasks which cannot be solved through analytical means.
10. _____ can perform actions in order to modify future percepts so as to obtain useful information.

Task 4. Find a word in the text that corresponds to the definition.

1. The process in which part of the output of a system is returned to its input in order to regulate its further output.
2. To have or take on the appearance, form, or sound of; to imitate.
3. To get access to an operating system or application, usually in a remote computer.
4. A process or set of rules to be followed in calculations or other problem-solving operations, espar. by a computer.
5. An interconnected system of networks that connects computers around the world.

Task 5. Match the word with its definition.

| | |
|------------------------------------|---|
| 1 artificial intelligence | a the conceptual structure and logical organization of a computer or computer-based system |
| 2 artificial neural network | b the ability to comprehend; to understand and profit from experience |
| 3 architecture | c a natural process resulting in the evolution of organisms best adapted to the environment |
| 4 intelligence | d a branch of computer science dealing with the simulation of intelligent behavior in computers |
| 5 software package | e written programs or procedures or rules and associated documentation pertaining to the operation of a computer system and that are stored in read/write memory |
| 6 natural selection | f the study of the design and operation of computer hardware and software, and of the application of computer technology |
| 7 genetic algorithm | g a mathematical model or computational model that is inspired by the structure and/or functional aspects of biological neural networks |
| 8 computer science | h computer-based method that uses processes based on natural evolution concepts such as genetic combination, mutation and natural selection |

Task 6. Discuss the following points.

1. What contribution have artificial neural networks made to our society?
2. How can learning systems be used in our everyday life?
3. What other artificial intelligence applications do you know? Describe their principle of work.

An Overview of Expert Systems.

Characteristics and Limitations of an Expert System.

When to Use Expert Systems

Task 1. Answer the following questions.

1. What is an expert system?
2. What advantages and drawbacks of expert systems can you list?
3. What characteristics of expert systems were mentioned in the text?

4. How are expert systems used?
5. What limitations for expert systems use can you list?
6. When is it advised to use expert systems?

Task 2. State whether these sentences are true (T) or false (F).

1. Using an expert system, a business can hardly minimize costs; the most probable outcome is higher expenses.
2. The first expert system was developed in 1980.
3. Expert systems can draw a conclusion and provide a solution for a problem; however, the possibility of error still exists.
4. Any expert system can easily cope with mixed problems, which include both rules and cases.
5. Expert systems can acquire knowledge, showing its 'intelligence' this way.

Task 3. Fill in the gaps with an appropriate word.

Conversation inference engine, structure, expert, knowledge base, intelligence, emulates, dialog interface, solve, programming, expert, systems, knowledge.

In artificial (1) _____, an expert system is a computer system that (2)_____ the decision-making ability of a human (3)_____. Expert systems are designed to (4)_____ complex problems by reasoning about (5)_____, like an expert, and not by following the procedure of a developer as is the case in conventional (6)_____. The first (7) _____ were created in the 1970s and then proliferated in the 1980s. Expert systems were among the first truly successful forms of AI software.

An expert system has a unique (8)_____, different from traditional programs. It is divided into two parts, one fixed, independent of the expert system: the (9)_____, and one variable: the (10)_____. To run an expert system, the engine reasons about the knowledge base like a human. In the 80s a third part appeared: a (11) _____ to communicate with users. This ability to conduct a (12) _____ with users was later called "conversational".

Task 4. Find a word in the text that corresponds to the definition.

1. A method or set of rules for solving problems other than by algorithm.
2. Property lent, esp money lent at interest for a period of time.
3. To judge or assess the worth of; appraise.
4. Special skill, knowledge, or judgment; expertness.
5. The area covered by an activity, topic, etc. range.

Task 5. Match the word with its definition.

| | |
|-------------------|--|
| 1 to retrieve | a to examine (a person or thing), as for a disease |
| 2 to request | b a method or set of rules for solving problems other than by algorithm |
| 3 to diagnose | c a means adopted in tackling a problem, job of work, etc. |
| 4 to predict | d a payment or bribe |
| 5 heuristics | e rational argument, deduction, judgment, etc. |
| 6 reasoning | f the disadvantageous aspect of a situation |
| 7 approach | g to express a desire for, esp. politely; ask for or demand |
| 8 troubleshooting | h causing a good result; advantageous |
| 9 to handle | i to bring back to a more satisfactory state; revive |
| 10 beneficial | j to keep safe from danger or harm; protect |
| 11 to preserve | k to state or make a declaration about in advance, esp. on a reasoned basis; foretell |
| 12 payoff | l to have power or control over smth/smb |
| 13 downside | m the process of locating and solving major problems or difficulties that occur in a company |

Task 6. Choose the best appropriate word for each sentence.

Expert systems were (1) _____ by researchers in the Stanford Heuristic Programming Project, including the "father of expert systems" with the Dendral and Mycin systems. Principal contributors to the (2) _____ were Bruce Buchanan, Edward Shortliffe, Randall Davis, William vanMelle, Carli Scott and others at Stanford. Expert systems were among the first truly successful forms of artificial (3) _____ software.

Research is also very active in France, where researchers focus on the automation of reasoning and logic (4) _____. The French Prolog computer language, designed in 1972, marks a real advance over expert systems like Dendral or Mycin: it is a shell that is to say a software structure ready to (5) _____ any expert system and to run it. It integrates an engine using First-Order logic, with rules and facts.

- | | | | |
|------------------|----------------|----------------|------------------|
| 1. a) set up; | b) introduced; | c) launched; | d) represented. |
| 2. a) technique; | b) process; | c) technology; | d) processing. |
| 3. a) brain; | b) mind; | c) intellect; | d) intelligence. |
| 4. a) engines; | b) searches; | c) finders; | d) detectors. |
| 5. a) adapt; | b) receive; | c) gain; | d) give. |

Task 7. Discuss the following points.

1. Working in pairs brainstorm possible areas of application for expert systems.
2. Do you think expert systems can fully substitute human experts? Why or why not?
3. Expert systems are inefficient when ethical issues are involved. To what extent do you agree with a statement?

Components of Expert Systems. The Inference Engine

Task 1. Answer the following questions.

1. What is an expert system?
2. What components of expert systems can you list?
3. What is knowledge base?
4. What is Inference Engine?
5. Explain the difference between backward and forward chaining.

Task 2. State whether these sentences are true (T) or false (F).

1. A knowledge base must be developed for each unique application.
2. The inference engine interacts with a knowledge base, thus providing expertise.
3. One of the challenges for expert system developers is capturing knowledge and relationships that are not precise or exact.
4. Most expert systems facilitate users with entering contradictory rules.
5. As the number of rules in an expert system increases, the precision of the expert system gradually falls.

Task 3. Fill in the gaps with an appropriate word.

Determining, interaction, knowledge base, solving, expertise, stores, knowledge engineering, development, technique, maintenance, involves, rules, complex.

The building, maintaining and (1)_____ of expert systems is known as (2)_____. Knowledge engineering is a "discipline that (3)_____ integrating knowledge into computer systems in order to solve (4)_____ problems normally requiring a high level of human (5)_____".

There are generally three individuals having an (6)_____ in an expert system. Primary among these is the end-user, the individual who uses the system for its problem (7)_____ assistance. In the construction and (8)_____ of the system there are two other roles: the problem domain expert who builds the system and supplies the (9)_____, and a knowledge engineer who assists the experts in (10)_____ the representation of their knowledge, enters this knowledge into an explanation module and who defines the inference (11)_____ required to solve the problem. Usually the knowledge engineer will represent the problem solving activity in the form of (12)_____. When these rules are created from domain expertise, the knowledge base (13)_____ the rules of the expert system.

Task 4. Find a word in the text that corresponds to the definition.

1. Characterized by integration.
2. A branch of logic designed to allow degrees of imprecision in reasoning and knowledge, typified by terms such as "very", "quite possibly", and "unlikely", to be represented in such a way that the information can be processed by computer.
3. A conditional statement that links given conditions to actions or outcomes.
4. Inconsistent; incompatible.
5. Figuring out a series of related or connected facts, events, etc.

Task 5. Match the word with its definition.

| | |
|-------------------------------|---|
| 1 inference engine | a a special kind of database for knowledge management, an information repository that provides a means for information to be collected, organized, shared, searched and utilized |
| 2 explanation facility | b an inference method that starts from facts and finishes with a conclusion |
| 3 knowledge base | c part of an expert system that "explains the reasoning of the system to the user" |
| 4 user interface | d an act or an instance of selecting or the state of being selected |
| 5 fuzzy logic | e an inference method that can be described (in lay terms) as working backward from the goal(s) |
| 6 backward chaining | f an event or other thing that is probable |

| | |
|---------------------------|---|
| 7 forward chaining | g part of expert system designed to produce a reasoning on rules |
| 8 selection | h the outcome or result of an act, process, event, etc. |
| 9 conclusion | i the software and input devices by means of which a computer and its user communicate |
| 10 probability | j a branch of logic designed to allow degrees of imprecision in reasoning and knowledge, typified by terms such as "very", "quite possibly", and "unlikely", to be represented in such a way that the information can be processed by computer |

Task 6. Choose the correct variant.

An example of the application of expert systems in the financial field is expert systems for mortgages. Loan departments are interested in expert systems for mortgages because of the growing (1)_____ of labour, which makes the handling and acceptance of relatively small loans less (2)_____. They also see a possibility for standardized, (3)_____ handling of mortgage loan by applying expert systems, appreciating that for the acceptance of mortgages there are hard and fast rules which do not always exist with other (4)_____ of loans. Another common application in the financial (5)_____ for expert systems is in trading recommendations in various marketplaces.

- | | | | |
|--------------------------|----------------------|------------------------|------------------------|
| 1. a) <i>price</i> ; | b) <i>cost</i> ; | c) <i>expense</i> ; | d) <i>value</i> . |
| 2. a) <i>expensive</i> ; | b) <i>valuable</i> ; | c) <i>profitable</i> ; | d) <i>successful</i> . |
| 3. a) <i>practical</i> ; | b) <i>hands-on</i> ; | c) <i>precise</i> ; | d) <i>efficient</i> . |
| 4. a) <i>types</i> ; | b) <i>kinds</i> ; | c) <i>examples</i> ; | d) <i>variants</i> . |
| 5. a) <i>place</i> ; | b) <i>scope</i> ; | c) <i>range</i> ; | d) <i>area</i> . |

**The Explanation Facility. The Knowledge Acquisition Facility.
The User Interface. Expert Systems Development.
The Development Process**

Task 1. Answer the following questions.

1. What is an Explanation Facility?
2. What is the role of an Explanation Facility in expert system?
3. What is the overall purpose of the knowledge acquisition facility?

4. What does Expert Systems development process include?
5. Who can execute the development process?

Task 2. State whether these sentences are true (T) or false (F).

1. The expert system, using the development process, can indicate all the factors and processes that were used in reaching the conclusion.
2. When more traditional programming languages were used, developing a knowledge base was much easier and faster.
3. Knowledge acquisition can be a manual process or a mixture of manual and automated procedures.
4. Today the user interface permits computers to develop and use their own expert systems.
5. Developing the expert system components requires special skills.

Task 3. Fill in the gaps with the appropriate words from the box.

Domain, interface, components, explanation, experience, monitoring, acquisition, probabilistic, assess, acceptable.

1. Explanation facilities in expert systems are often not widely used, and where used not viewed as _____ by their users.
2. To work with a system, users have to be able to control and _____ the state of the system.
3. The international standard for describing the method of selecting, implementing and _____ the life cycle for software is ISO/IEC 12207.
4. Explanation facilities date from the era of expert systems (ES) where they were used in order to provide an _____ about the inference process.
5. The knowledge acquisition facility addresses specific needs of the knowledge engineer during the knowledge _____ process.
6. The user _____ of the automobile is on the whole composed of the instruments the driver can use to accomplish the tasks of driving and maintaining the automobile.
7. The system will have the capability to search the database for existing knowledge once the _____ passes the domain analysis function and is ready to be analyzed by the Knowledge Acquisition workflow.
8. Expert systems do not typically provide a definitive answer, but provide _____ recommendations.

9. The user interface includes hardware (physical) and software (logical) _____ .

10. Personal and professional knowledge, skills and attributes are developed through _____ .

Task 4. Find a word in the text that corresponds to the definition.

1. The planning, scheduling, or performing of a program.
2. The entire set of programs, procedures, and related documentation associated with a system and especially a computer system.
3. To bring up to date.
4. The return of a portion of the output of a process or system to the input, especially when used to maintain performance or to control a system or process.
5. The process of storing information in a computer memory or on a magnetic tape or disk.

Task 5. Match the words with their definitions.

| | |
|----------------------|--|
| 1 conclusion | a a group of interacting, interrelated, or interdependent elements forming a complex whole |
| 2 update | b any system of writing |
| 3 menu | c to give official sanction, confirmation, or approval to, as elected officials, election procedures, documents, etc. |
| 4 system | d a program (as a word processor or a spreadsheet) that performs one of the major tasks for which a computer is used |
| 5 validate | e a result, issue, or outcome; settlement or arrangement |
| 6 interface | f to put into effect according to or by means of a definite plan or procedure |
| 7 script | g a list of options available to a user, as displayed on a CRT or other type of screen |
| 8 application | h a person who writes computer programs |
| 9 implement | i to incorporate new or more accurate information in (a database, program, procedure, etc.) |
| 10 programmer | j a common boundary or interconnection between system, equipment, concepts, or human beings. Communication or interaction |

Task 6. Choose the most appropriate word.

If communication and support for customers is your responsibility, you understand the problems of identifying and resolving support problems. Knowledge-based expert systems can (1)_____ to the needs of individual customers and businesses. Interactive expert systems can (2)_____ your message or service solution based on the problems and specific circumstances identified by the customer.

A computerized expert system can (3)_____ your resources by "cloning" the knowledge of your staff to efficiently (4)_____ answers to tricky but routine problems, saving the human experts for the problems that (5)_____ more than knowledge.

- | | | | |
|-------------------------|-------------------------|-----------------------|----------------------|
| 1. a) <i>manage</i> ; | b) <i>reply</i> ; | c) <i>respond</i> ; | d) <i>answer</i> . |
| 2. a) <i>hand out</i> ; | b) <i>communicate</i> ; | c) <i>broadcast</i> ; | d) <i>transfer</i> . |
| 3. a) <i>lengthen</i> ; | b) <i>stretch</i> ; | c) <i>prolong</i> ; | d) <i>extend</i> . |
| 4. a) <i>provide</i> ; | b) <i>deliver</i> ; | c) <i>give</i> ; | d) <i>supply</i> . |
| 5. a) <i>demand</i> ; | b) <i>want</i> ; | c) <i>require</i> ; | d) <i>claim</i> . |

Task 7. Discuss the following points.

1. What forms of expert systems can you name?
2. What are the main features of expert systems?
3. What steps of systems development do you know?
4. In what way can you implement the expert system?
5. Provide your own example of expert systems development.

Participants in Developing and Using Expert Systems. Expert Systems Development Tools and Techniques. Expert Systems Development Alternatives

Task 1. Answer the following questions.

1. What abilities should a domain expert have?
2. Who are knowledge engineers and knowledge users?
3. What programming languages do you know?
4. What is an expert system shell?
5. How can expert systems be developed?

Task 2. State whether these sentences are true (T) or false (F).

1. As a rule, there is one person developing and using an expert system.
2. An expert system serves to address a specific area of knowledge, called the domain.
3. The introduction of computer systems has simplified the use of programming languages.
4. The development of an expert system is usually time-consuming and expensive.
5. Developing an expert system from scratch is much easier than from a shell.

Task 3. Fill in the gaps with an appropriate word.

LAN networks, mainframes, off-the-shelf, domain expert, programming languages, knowledge engineers, artificial intelligence, customization, software package, shell.

1. _____ is a person with special knowledge or skills in a particular area.
2. Receiving information from domain experts, _____ interpret the presented information and relay it to computer programmers who code the information into systems databases to be accessed by end-users.
3. Most software that you use will be _____ packages and the same application will typically be run by thousands or even millions of users.
4. The earliest _____ predate the invention of the computer.
5. _____ is the area of computer science focusing on creating machines that can engage on behaviors that humans consider intelligent.
6. A _____ is an assemblage of files and information about those files.
7. Modern _____ can run multiple different instances of operating systems at the same time.
8. Mass _____ is the use of flexible computer-aided manufacturing systems to produce custom output.
9. The defining characteristics of _____, in contrast to wide area networks (WANs), include their usually higher data-transfer rates, smaller geographic area, and lack of a need for leased telecommunication lines.
10. In expert systems, a _____ is a piece of software that is an "empty" expert system without the knowledge base for any particular application.

Task 4. Find a word in the text that corresponds to the definition.

1. A field or scope of knowledge or activity. (text 1)
2. A software that provides an interface for users of an operating system, which provides access to the services of a kernel. (text 2)

3. Something demanded or imposed as an obligation. (text 2)
4. The means or equipment facilitating the performance of an action. (text 2)
5. A set of programs designed for a specific type of problem in statistics, production control, etc., making it unnecessary for a separate program to be written for each problem. (text 3)

Task 5. Match the word with its definition.

| | |
|------------------------|--|
| 1 burden | a to continue or retain; keep in existence |
| 2 hazardous | b complex and refined (of machines, methods, etc.) |
| 3 sophisticated | c to insert or transfer (data) into a computer |
| 4 to capture | d involving great risk |
| 5 to maintain | e something that is carried; something that is exacting, oppressive, or difficult to bear |

Task 6. Choose the best appropriate word for each sentence.

1. When someone performs preventative _____, it is usually because a potential problem or security threat has been recognized with a computer or server, and the system administrators are working to deal with the issue before it becomes a true problem.

a) support; b) maintenance; c) service; d) retention.

2. The _____ of the new system occurs when the old system is replaced by a new one.

a) fulfillment; b) execution; c) realization; d) implementation.

3. _____ your information will help us provide an up-to-date report on your business to the public.

a) updating; b) modernization; c) upgrading; d) renovation.

4. The _____ software category includes programs developed to track and record computer behavior.

a) control; b) monitoring; c) spying; d) tracing.

5. A programming _____ is a program or application that software developers use to create, debug, maintain, or otherwise support other programs and applications.

a) instrument; b) method; c) tool; d) appliance.

Task 7. Discuss the following points.

1. Knowledge necessary for a domain expert.
2. Earlier and contemporary programming languages.

3. Types of expert system shells and their capabilities.
4. Possible ways of developing expert systems.
5. General costs and time connected with expert systems development.

Applications of Expert Systems and Artificial Intelligence. Intergrating Expert Systems

Task 1. Answer the following questions.

1. What are the possible ways of application of expert systems and artificial intelligence?
2. How can expert systems simplify the work of managers?
3. Which expert systems are used in hospitals and for what purposes?
4. How can an expert system be integrated with other organization's systems?
5. What makes expert systems more efficient than information systems such as TPS and DSS?

Task 2. State whether these sentences are true (T) or false (F).

1. The sphere of application of expert systems and artificial intelligence is quite narrow.
2. Some expert systems can be used for entertainment.
3. An expert system helps managers evaluate employees' performance.
4. An expert system functions solely independently of other systems.
5. Information systems provide more support in making managerial decisions than expert systems.

Task 3. Fill in the gaps with the appropriate word.

Virus detection, processing system, maintenance, boot sector, antivirus software, speech recognition, bots, retrieval, databases, input.

1. Internet _____ are software applications that run automated tasks over the Internet.
2. _____ allows people to compose documents and control their computers with their voice.
3. Software _____ is the modification of a software product after delivery to correct faults, to improve performance or other attributes.
4. _____ detects and removes viruses, worms, trojans, and other forms of malware.

5. Computer _____ typically contain aggregations of data records or files, such as sales transactions, product catalogs and inventories, and customer profiles.

6. A software data _____ is normally a standalone unit of software, in that its output can be directed to any number of other information processing subsystems.

7. Data _____ is an encompassing term for any task that requires information to be entered into a computer in a variety of forms.

8. Powerful _____ programs protect the computer from viruses and spyware at all entry points.

9. The purpose of a _____ is to allow the boot process of a computer to load a program stored on the same storage device.

10. Many universities and public libraries use information _____ systems to provide access to books, journals and other documents.

Task 4. Find a word in the text that corresponds to the definition.

1. A business deal or action, such as buying or selling something.
2. Willingness and ability to purchase goods and services.
3. Fixed firmly and deeply in a surrounding solid mass.
4. Tools, devices, machines, etc., that you need to do a particular job or activity.
5. The management of materials flow through an organization, from raw materials through to finished goods.

Task 5. Match the word with its definition.

| | |
|------------------------|--|
| 1 to impede | a to continue or retain; keep in existence |
| 2 to supplement | b to completely get rid of something |
| 3 to overlap | c to provide a supplement to, esp. in order to remedy a deficiency |
| 4 to eradicate | d to manage successfully |
| 5 to handle | e to cover and extend beyond (something); to coincide partly in time, subject, etc. |

Task 6. Choose the best appropriate word for each sentence.

1. _____ of new technologies simplifies many business activities and brings new opportunities to all business sectors.

- a) *appliance*; b) *application*; c) *exploitation*; d) *utilization*.

2. With the latest tools available, information _____ has become a powerful resource and a large expense for many organizations.

a) *administration*; b) *control*; c) *management*; d) *direction*.

3. Information _____ becomes an important issue when it is necessary to access information maintained by other people or companies, such as that on the Internet.

a) *accuracy*; b) *correctness*; c) *precision*; d) *rightness*.

4. Statistical _____ of data is essential in order to make use of the data in the right form.

a) *interpretation*; b) *explanation*; c) *examination*; d) *treatment*.

5. Automated information _____ systems are used to reduce what has been called "information overload".

a) *retrieval*; b) *withdrawal*; c) *extraction*; d) *recovery*.

Task 7. Discuss the following points.

1. Application of expert systems in banks and other financial institutions.
2. The role of expert systems in manufacturing processes.
3. Expert systems as a way out of managing information flows.
4. The task performed by expert systems in medicine.
5. Advantages of utilizing expert systems on the enterprise.

Virtual Reality

Task 1. Answer the following questions.

1. What is virtual reality?
2. What do virtual reality simulations require?
3. What are alternative concepts for virtual reality?
4. What forms of virtual reality do you know?
5. What are the most useful virtual reality applications in your opinion?

Why?

Task 2. State whether these sentences are true (T) or false (F).

1. The term "virtual reality" was coined by Vice President of VPL Research

2. A virtual reality enables one or more users to move and react in a computer-simulated environment.

3. The HMD also contains a position tracker to monitor the location of user's head and the direction in which the user is moving.
4. BOOM and CAVE are alternative concepts to virtual reality.
5. Virtual reality is represented by the only form called "immersive virtual reality".
6. Some virtual reality applications allow views of real environments with superimposed virtual objects.
7. There are hundreds of applications of virtual reality with more being developed as the cost of hardware and software declines and people's imaginations are opened to the potential of virtual reality.
8. We cannot use virtual reality in tourism.
9. A number of movies use virtual reality technologies to bring realism to a screen.
10. Virtual reality has been used to increase real estate sales in several powerful ways.

Task 3. Fill in the gaps with the appropriate words from the box.

Immersive virtual reality, virtual reality, BOOM and CAVE, education, simulations, haptic interface, head-mounted display, applications, military, entertainment.

1. _____ is a system that enables one or more users to move and react in a computer-simulated environment.
2. _____ may represent any three-dimensional setting, real or abstract, such as building, human anatomy, or crime scene reconstruction.
3. Virtual reality _____ require special interface devices that transmit the sights, sounds and sensations of the simulated world to the user.
4. To see in the virtual world the user can wear a _____.
5. Alternative concepts – _____ – were developed for immersive viewing of virtual environments to overcome uncomfortable intrusiveness of a HMD.
6. The _____, which relays the sense of touch and other physical sensations in the virtual world, is the least developed and perhaps the most challenging to create.
7. Some virtual reality _____ allow views of real environment with superimposed virtual objects.
8. Virtual environments are used in _____ to bring exciting new recourses into the classroom.

9. Virtual technology has also been applied by the _____, to help aircraft maintenance a virtual reality system has been developed to simulate an aircraft and give a user a sense of touch while computer graphic give the senses of sight and sound.

10. Many virtual reality _____ sites charge a monthly fee.

Task 4. Find a word in the text that corresponds to the definition.

1. To invent a new word or expression, especially one that many people start to use ("Virtual Reality", par. 1).

2. To become completely involved in an activity ("Virtual Reality", par. 1).

3. The way in which you see the information from a computer program on a screen, or how you type information into the program ("Forms of Virtual Reality", par. 2).

4. The process of cutting into someone's body to repair or remove a part that is damaged ("Virtual Reality Application", par. 2).

5. Using a system in which information is recorded or sent out electronically in the form of numbers, usually ones and zeros ("Education and Training", par. 1).

Task 5. Match the words with their definitions.

| | |
|--------------------------|---|
| 1 virtual reality | a to grow or change into something bigger, stronger, or more advanced, or to make someone or something do this |
| 2 information | b a television or part of a computer with a screen, on which you can see pictures or information |
| 3 signal | c a sound or action that you make in order to give information to someone or tell them to do something |
| 4 monitor | d facts or details that tell you something about a situation, person, event etc. |
| 5 develop | e an environment produced by a computer that looks and seems real to the person experiencing it |

Task 6. Choose the best appropriate word for each sentence.

1. The term "artificial reality", _____ by Myron Krueger, has been in use since the 1970s; however, the origin of the term "virtual reality" can be traced back to the French playwright, poet, actor, and director Antonin Artaud.

a) *coined*; b) *created*; c) *discovered*; d) *contrived*.

2. Virtual reality can _____ its roots to the 1860s, when 360-degree art through panoramic murals began to appear.

a) *track*; b) *trace*; c) *trail*; d) *chase*.

3. There has been an _____ in interest in the potential social impact of new technologies, such as virtual reality.

a) *growth*; b) *increment*; c) *enlargement*; d) *increase*.

4. David Em was the first fine artist to _____ navigable virtual worlds in the 1970s.

a) *coin*; b) *create*; c) *discover*; d) *contrive*.

5. A very basic VR simulation with simple sight and sound models has been shown to be _____ in phobia treatment, like zoophobia, and acrophobia, as a step between basic exposure therapy such as the use of simulacra and true exposure.

a) *inestimable*; b) *priceless*; c) *invaluable*; d) *inestimable*.

Task 7. Discuss the following points.

1. Do you think virtual reality is useful nowadays? Why?

2. Would you like to use virtual reality technologies during your English classes? In which way should it be done?

3. Do you think Ukraine is a country which uses virtual reality technologies much? Why?

4. Do you think only rich and developed countries could use virtual reality technologies?

5. What other applications of virtual reality you know?

Interface Design and Controls

Task 1. Answer the following questions.

1. What is a sign-on procedure used for?

2. Describe the procedure of interactive processing.

3. What kind of applications and design techniques are used in interactive processing?

4. Why is it necessary to support a good interactive dialogue between the system and the user?

5. What elements should be considered in the system design?

Task 2. State whether these sentences are true (T) or false (F).

1. A sign-on procedure includes three stages: identification, verification and authorization.
2. Using an interactive dialogue people can directly interact with the processing component through terminals.
3. Restart procedures simplify and shorten data entry.
4. When designing a system an attractive format and layout should be used.
5. All dialogues should be written in straightforward terms.

Task 3. Fill in the gaps with an appropriate word.

Help facility, processing, data entry, menu, response times, restart, identification number.

1. Recommended system _____ : 0.1 second, 1 sec., 10 sec. – depending on the type of human-computer interaction.
2. _____ can be performed by an individual typing at a keyboard or by a machine.
3. The automatic _____ of Windows is an attempt by your computer to limit the damage that can be caused by an error.
4. _____ provides users with on-screen explanations of system commands, formatting conventions, or usage techniques.
5. You can choose an item from the _____ by simply pointing to the item with a mouse and clicking one of the mouse buttons.
6. There are two main types of _____ : fully automatic and interactive.
7. The user is linked to a password and _____ , which determine his user profile.

Task 4. Find a word in the text that corresponds to the definition.

1. The ability to obtain or retrieve (information) from a storage device.
2. Sensitive personal information or sensitive institutional information.
3. A device, often equipped with a keyboard and a video display, through which data or information can be entered or displayed.
4. Computer software designed to help the user to perform singular or multiple related specific tasks.
5. A signal that initiates an operation defined by an instruction.

Task 5. Match the word with its definition.

| | |
|----------------------|--|
| 1 authorization | a an array or matrix of data that contains items that are searched |
| 2 password | b the process of granting approval or permission to a person or device seeking access to a resource, such as a database or network |
| 3 identification | c an interactive computer system in which the operator requests the processing to be performed by making selections from a series of menus |
| 4 logon | d a sequence of characters used to gain access to a computer system |
| 5 verification | e confine or keep within certain often specified limits or selected bounds |
| 6 restrict | f recognizing the user as valid |
| 7 menu-driven system | g the process of identifying oneself to a computer, usually by entering one's username and password |
| 8 lookup table | h entering an additional code before access is given |
| 9 dialogue | i the specific arrangement of data on a printed page, display screen, or such, or in a record, data file, or storage device |
| 10 format | j messages and prompts communicated between the system and the user |

Task 6. Discuss the following points.

1. What are the advantages of interactive processing?
2. What design factors should be taken into account for interactive processing?
3. Describe the sign-on procedure through an example.

Design of System Security and Controls

Task 1. Answer the following questions.

1. What are the key considerations of developing system security and controls?
2. What is disaster planning?

3. What does the process of disaster recovery involve?
4. What is the difference between a hot site and a cold site?
5. What stages of prevention do you know?

Task 2. State whether these sentences are true (T) or false (F).

1. The least efficient time to deal with potential errors is in the design phase.
2. The secondary tools used in disaster planning and recovery are hardware, software and database, telecommunications and personnel backups.
3. Companies never form arrangements with their hardware vendor to provide access to compatible computer hardware systems in the event of a disaster.
4. If the primary computer has problems, the hot site can be used immediately as a backup.
5. Some companies provide database backup services by distributing critical data to remote data storage centers.
6. Some IS departments are closed shops, in which only authorized operators, programmers and systems analysts can run the computers.

Task 3. Fill in the gaps with an appropriate word.

Electronic commerce, input controls, chief technology officers, hardware vendor, telecommunications, technical support, personnel controls, critical data, backups, database controls.

1. Establishing technical standards and ensuring adherence is an additional responsibility for _____ .
2. The secondary purpose of _____ is to recover data from an earlier time, according to a user-defined data retention policy.
3. As an independent _____ , you need to constantly provide hardware solutions at lower costs.
4. Most companies offer _____ for the products they sell, either freely available or for a fee.
5. Modern _____ typically uses the World Wide Web at least at one point in the transaction's life-cycle.
6. Most companies believe their _____ is adequately protected from a catastrophic event – until something happens.
7. In modern times, _____ involves the use of electrical devices such as the telegraph, telephone, and teleprinter.

8. The purpose of _____ is to reduce errors while protecting the computer system against improper input.

9. Many of _____ are provided by database management systems.

10. _____ can involve the use of identification numbers and passwords that allow only certain people's access to particular data and information.

Task 4. Find a word in the text that corresponds to the definition.

1. The occurrence of an incorrect result produced by a computer.

2. Internal consistency or lack of corruption in electronic data.

3. The retention of retrievable data on a computer or other electronic system.

4. The use of wire, radio, optical, or other electromagnetic channels to transmit or receive signals for voice, data, and video communications.

5. A computer or computer program that manages access to a centralized resource or service in a network.

Task 5. Match the word with its definition.

| | |
|----------------------------|---|
| 1 installation | a an asset or item that is purchased with the hope that it will generate income or appreciate in the future |
| 2 backup | b a duplicate, operational hardware system or immediate access to one through a specialized vendor |
| 3 investment | c a computer environment that includes rooms, electrical service, telecommunications links, data storage devices, etc. |
| 4 disaster recovery | d the name given to movements of money such as deposits and withdrawals or transferring money between bank accounts |
| 5 transaction | e the process of restoring an IS to full operation after an interruption in service, including equipment repair/replacement, file recovery/restoration, and resumption of service to users |
| 6 hot site | f the act of putting the program onto a computer system so that it can be executed |
| 7 cold site | g the activity of copying files or databases so that they will be preserved in case of equipment failure or other catastrophe |

Task 6. Discuss the following points.

1. Why is it necessary to back up your data? How often do you make a backup?
2. Why the most do IS departments establish systems controls? Give the advantages.
3. Is it equally important for all systems to have a disaster recovery plan? Why, or why not?

**Generating Systems Design Alternatives.
Evaluating and Selecting a Systems Design**

Task 1. Answer the following questions.

1. What factors should be considered in selecting a vendor?
2. Why is it necessary to make a request for proposal?
3. What are the advantages and disadvantages of the financial options?
4. What is the final step in the systems design?
5. Describe the evaluation steps.

Task 2. State whether these sentences are true (T) or false (F).

1. When additional hardware and software are required, alternative designs are often generated without input from vendors.
2. The request for proposals specifies in detail the required resources such as hardware and software.
3. When it comes to acquiring computer systems, you can purchase, lease or rent them.
4. Constant advances in technology do not carry any risks.
5. Normally, the process of evaluation and selection is limited to preliminary evaluation before a design is selected.

Task 3. Fill in the gaps with an appropriate word.

Purchase price, hardware and software, systems design, RFPs, vendor, scalable, equipment.

1. A combination of _____ forms a usable computing system.
2. Generally RFPs are sent to an approved supplier or _____ list.
3. _____ often include specifications of the item, project or service for which a proposal is requested.

4. In some cases, lease or rental fees can amount to more than the original _____ after a few years.

5. Some servers are designed to be _____ to allow processors to be added, memory to be upgraded, and peripheral devices to be installed.

6. _____ is therefore the process of defining and developing systems to satisfy specified requirements of the user.

7. The vendors should also be asked to supply a list of companies that use their _____ for a similar purpose.

Task 4. Find a word in the text that corresponds to the definition.

1. Great skill or knowledge in a particular field or hobby; advice, or opinion, of an expert.

2. A conditional conveyance of property as security for the repayment of a loan.

3. The body of persons employed by or active in an organization, business, or service.

4. Written programs or procedures or rules and associated documentation pertaining to the operation of a computer system that are stored in read/write memory.

5. Numerical or other information represented in a form suitable for processing by computer.

Task 5. Match the word with its definition.

| | |
|---------------------------------|--|
| 1 network | a actions performed to keep some machine or system functioning or in service |
| 2 final evaluation | b the total sum of money to be paid out to employees at a given time |
| 3 maintenance | c an assortment of things from which a choice can be made |
| 4 preliminary evaluation | d a document that specifies in detail required resources such as hardware and software |
| 5 selection | e a system of computers interconnected by telephone wires or other means in order to share information |
| 6 payroll | f a detailed investigation of the proposals offered by the vendors remaining after the preliminary evaluation |
| 7 request for proposal | g an initial assessment whose purpose is to dismiss the unwanted proposals |

Task 6. Discuss the following points.

1. Identify some of the advantages and disadvantages of purchasing versus leasing hardware.
2. How would you decide which approach to use for evaluation when selecting a new personal computer and printer?
3. Describe the final step in the systems design.

Evaluation Techniques

Task 1. Answer the following questions.

1. What approaches are commonly used to make the final evaluation and selection?
2. What is a group consensus?
3. What is a cost/benefit analysis?
4. What is a benchmark test?
5. What is a point evaluating system?

Task 2. State whether these sentences are true (T) or false (F).

1. The exact procedure used to make the final evaluation and selection varies from one organization to another.
2. A decision-making group includes the members of the development team who participated in neither systems analysis nor systems design.
3. Once expressed in monetary terms, all the costs are compared with all the benefits.
4. Many publications such as *Computerworld*, *PC Magazine* and some others do not summarize, evaluate and compare various computer systems and manufacturers according to a number of criteria.
5. The approach of point evaluation is used when there are not many options to be evaluated, such as which software best matches a particular business's needs.

Task 3. Fill in the gaps with an appropriate word.

Selection, options, benchmark tests, equipment, cost/benefit analysis, point evaluation, software, storage capacity, weight, costs.

1. Some computer companies forbid disclosure of _____ _____ without prior written approval.

2. Point evaluation system is used when there are many options to be evaluated, such as which _____ best matches a particular business's needs.

3. _____ might include the deposit required on contract signing, payment schedules, lease and rental arrangements, maintenance costs, and availability of leasing companies.

4. A decision-making group is appointed and given the responsibility of making the final evaluation and _____ .

5. One of the disadvantages of _____ is the difficulty of determining the monetary values for all the benefits.

6. A benchmark test is for an organization to develop its own tests and then use them to compare the _____ it is considering.

7. Performance concerns might include speed, _____ , and processing capabilities.

8. Cost/benefit analysis is used to evaluate _____ whose costs can be quantified, such as which hardware or software vendor to select.

9. Each evaluation factor is assigned a _____ , in percentage points, based on importance.

10. When using _____ , an organization can list and evaluate literally hundreds of factors.

Task 4. Find a word in the text that corresponds to the definition.

1. An examination that compares computer systems operating under the same conditions.

2. An approach that lists and compares the costs and benefits of each proposed system.

3. An approach that does not employ monetary values.

4. An approach that is used to evaluate which of several layouts or report formats is best.

5. A procedure that is used to make the final evaluation and selection; it varies from one organization to another.

Task 5. Match the word with its definition.

| | |
|---------------------|---|
| 1 equipment | a process of choosing |
| 2 evaluation | b money that is put or stored for safe-keeping |
| 3 selection | c advantage; profit |

| | |
|---------------------|--|
| 4 cost | d examination or trial of something to find its quality, value, composition, etc. |
| 5 benefit | e customer |
| 6 investment | f things needed for a particular purpose |
| 7 deposit | g price to be paid for a thing |
| 8 client | h sum of money that is put in (e.g. business) |
| 9 weight | i degree of importance or influence |
| 10 test | j process of deciding the worth of something in terms of money or other goods for which it can be exchanged |

Task 6. Choose the best appropriate word for each sentence.

- Group consensus is decision-making by a group that _____ and given the responsibility of making the final evaluation and selection.
a) *is elected;* b) *is chosen;* c) *is appointed;* d) *is decided.*
- Cost/benefit analysis is an approach that _____ the costs and benefits of each proposed system.
a) *includes;* b) *concludes;* c) *lists;* d) *registers.*
- A benchmark test is _____ that compares computer systems operating under the same conditions.
a) *an examination;* b) *a test;* c) *a trial;* d) *a try.*
- Benchmark tests might be used _____ the end-user system response time on two similar systems.
a) *to compare;* b) *to examine;* c) *to judge;* d) *to estimate.*
- In the point evaluation system, the rows of the grid list the various factors important to the client company, and the columns of the grid represent the various _____ that responded to the request for proposal.
a) *retailers;* b) *vendors;* c) *sellers;* d) *merchandisers.*

Task 7. Discuss the following points.

- Do you know what evaluation techniques are used for? What approaches do they consist of?
- What are the functions of group consensus?
- What is cost/benefit analysis used for? What are the typical costs and benefits which are associated with the evaluation and selection procedure?
- What are the purposes of the benchmark test? Why is it considered as one of the best approaches?
- What is the essence of the point evaluation system? What factors can point evaluation include? Why?

Freezing Design Specifications. The Contract. The Design Report

Task 1. Answer the following questions.

1. What is freezing design specifications?
2. What are the drawbacks of standard contracts?
3. What is the purpose of a contract?
4. What are system specifications? What do system specifications include?
5. What is a design report? What does it reflect?

Task 2. State whether these sentences are true (T) or false (F).

1. The organizations which allow or even encourage design changes do not use agile or rapid systems development approaches.
2. If new computer facilities are being acquired, it is very important to develop a good contract.
3. Standard contracts are designed to protect the vendor and the organization buying the computer equipment.
4. System specifications are the final results of system design which are contained in a design report.
5. Often the users and the project team decide to hold all changes until the original effort is completed and then prioritize the entire set of requested changes.

Task 3. Fill in the gaps with an appropriate word.

Design, profit, design report, organization, contracts, consultants, vendor, implementation, cost, specifications.

1. Most computer vendors provide standard _____ .
2. The contract stipulates the actions that the _____ will take in case of delays or problems.
3. The _____ reflects the decisions made for systems design and prepares the way for system implementation.
4. Freezing systems design specifications means that the user agrees in writing that the _____ is acceptable.
5. Prior to _____ , experienced project managers place formal controls on the project scope.

6. Assessing the _____ and scheduling impact of each requested change and deciding whether to include the change are the activities of the next phases.

7. More and more organizations are using outside _____ and legal firms to help them develop their own contracts.

8. All equipment _____, software, training, installation, maintenance, and so on are clearly stated in the contract.

9. Finding the best terms where both the vendor and the organization buying the computer equipment make a _____ can be difficult.

10. The contracts stipulate exactly what organizations expect from the system vendor and what interaction will occur between the vendor and the _____.

Task 4. Find a word in the text that corresponds to the definition.

1. A binding agreement usually in a written form designed to protect both the selling and buying organizations.

2. Details, instructions, etc. for the design, materials of something to be made or done.

3. A user's written agreement that confirms that the design is acceptable.

4. The primary result of system design, reflecting the decisions made and preparing the way for system implementation.

5. Carrying out an undertaking, agreement, promise.

Task 5. Match the word with its definition.

| | |
|---------------------|--|
| 1 design | a conditions offered or agreed to |
| 2 contract | b important stages (e.g. of installation and implementation) |
| 3 terms | c expressions of desire for something; things asked for |
| 4 delay | d general arrangement or planning of something |
| 5 milestones | e fixed dates for finishing (doing) something |
| 6 obligation | f binding agreement between persons or organizations to supply goods, to do work, etc. at a fixed price |

| | |
|-------------------------|---|
| 7 consultant | g person who gives expert advice (e.g. in business) |
| 8 request | h putting off until later |
| 9 specifications | i details, instructions, etc. for the design, materials, of something to be made or done |
| 10 deadlines | j promise, duty or condition that shows what action ought to be taken |

Task 6. Choose the best appropriate word for each sentence.

1. Near the end stage, some organizations _____ further changes in the design of the system.
a) *forbid*; b) *prohibit*; c) *ban*; d) *order not to do*.
2. The design report reflects the _____ made for systems design.
a) *effects*; b) *results*; c) *decisions*; d) *conclusions*.
3. The contract _____ actions that the vendor will take in case of delays or problems.
a) *states*; b) *stipulates*; c) *specifies*; d) *determines*.
4. These phases _____ the blueprints and groundwork for the rest of systems development.
a) *provide*; b) *supply*; c) *give*; d) *grant*.
5. A key component of the process is to assess the _____ and schedule impact of each requested change, no matter how small, and to decide whether to include the change.
a) *cost*; b) *price*; c) *loss*; d) *expense*.

Task 7. Discuss the following points.

1. What is the essence of freezing systems design specifications? What does it mean?
2. What is to be stipulated in the contract?
3. What saves a considerable time in developing the contract?
4. Why is it important to understand and thoroughly complete the systems development activities for any new system?
5. What do experienced project managers do prior to systems implementation? What is a key component of the process?

Electronic Commerce. An Introduction to Electronic Commerce: Business-to-Consumer (B2C) E-commerce. Consumer-to-Consumer (C2C) E-commerce. Global E-commerce

Task 1. Answer the following questions.

1. Is e-commerce popular nowadays?
2. What does consumer-to-consumer commerce involve?
3. What are the steps involved in localization?
4. What are the most difficult decisions in a company's global Web strategy?
5. When did Yahoo! announce about plans to buy European comparison-shopping site Kelkoo?

Task 2. State whether these sentences are true (T) or false (F).

1. E-commerce isn't gaining broad acceptance among the consumers.
2. France-based Kelkoo reaches about 10 % of all European Internet users and counts more than 2,500 individual merchants among its paying customers.
3. The elimination of an intermediate organization between the producer and the consumer is called disintermediation.
4. Argentina and Mexico, the economic giants of Latin America, are leading the way in terms of developing e-commerce businesses and the requisite infrastructure, legal, and regulatory foundations necessary to support them.
5. The second step in developing global e-commerce strategy is to determine which global markets make the most sense for selling products or services online.

Task 3. Fill in the gaps with an appropriate word.

VAT, e-commerce, global market, the Internet, credit cards, customers, the producer, localization, consumer-to-consumer, technology.

1. _____ for consumers is gaining broad acceptance, although some shoppers are not yet convinced that it is worthwhile to connect to the Internet.
2. The elimination of an intermediate organization between _____ and the consumer is called disintermediation.

3. The growth of _____ is responsible for reducing the use of the classified pages of newspapers to advertise and sell personal items.

4. The use of the _____ is growing rapidly in markets throughout Europe, Asia and Latin America.

5. South Korea is a leader in terms of access to broadband _____, with more than 80 % of total households having access to high-speed Internet services at less than \$30 per month.

6. _____ are commonly used to complete transactions on the Internet in many countries.

7. The first step in developing a global e-commerce strategy is to determine which _____ make the most sense for selling products or services online.

8. _____ requires companies to have a deep understanding of the country, its people, and the market, which means either building a physical presence in the country or forming partnerships so that detailed knowledge can be gathered.

9. A _____ law was enacted to level the playing field between Europe and US-based companies selling in the European commerce market.

10. Companies must take painstaking steps to ensure that e-commerce _____ have a local experience even though they're shopping at the Web site of a foreign company.

Task 4. Find a word in the text that corresponds to the definition.

1. The elimination of an intermediate organization between the producer and the consumer.

2. Buying and selling a product or service over electronic systems such as the Internet and other computer networks.

3. A person or group of people who are the final users of products and/or services generated within a social system.

4. The management of the flow of resources between the point of origin and the point of destination in order to meet some requirements, for example of customers or corporations.

5. A form of a consumption tax.

Task 5. Match the words with their definitions.

| | |
|----------------------------|--|
| 1 disintermediation | a a businessperson who trades in commodities that were produced by others, in order to earn a profit |
| 2 e-commerce | b buying and selling a product or service over electronic systems such as the Internet and other computer networks |
| 3 merchant | c type of a tax |
| 4 VAT | d one that produces, especially a person or organization that produces goods or services for sale |
| 5 middle man | e the elimination of an intermediate organization between the producer and the consumer |
| 6 producer | f a system of organizations, people, technology, activities, information and resources involved in moving a product or service from supplier to customer |
| 7 customer | g an independent trader engaged in the distribution of goods from producer to consumer |
| 8 supply chain | h it allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution, which can be a retail or virtual bank, credit union or building society |
| 9 accessibility | i it is the degree to which a product, device, service, or environment is available to as many people as possible |
| 10 e-banking | j a person or group of people who are the final users of products and or services generated within a social system |

Task 6. Discuss the following points.

1. In your opinion, what is more popular, B2C e-commerce or C2C e-commerce?
2. What does e-commerce mean?
3. In what countries is the use of the Internet growing rapidly?
4. What country in Asia represents a huge market opportunity?
5. What strategies for global e-commerce do you know?

Mobile Commerce

Task 1. Answer the following questions.

1. What is mobile commerce? How does it work?
2. How can security of m-commerce be provided?
3. What technology is needed for mobile commerce?
4. What is a WAP?
5. Can you name any potential m-commerce applications?

Task 2. State whether these sentences are true (T) or false (F).

1. M-commerce purchases have not taken off yet.
2. The acceptance of m-commerce is currently geographically dependent.
3. In most Western European countries, communicating via wireless devices is rare, and consumers are not willing to use m-commerce.
4. Shoppers at some of the retailer's stores can steal the bar codes of their items with handheld devices to record purchases, tally costs, receive special offers, and check out and pay.
5. M-commerce will only be popular if it provides users with real benefits.

Task 3. Fill in the gaps with an appropriate word.

WAP, item, infrastructure, complicate, encryption, marketing, handheld, wireless, applications, needs.

1. M-commerce relies on the use of _____ devices, such as personal digital assistants, cell phones, and smart phones.
2. It is nearly as easy to purchase an _____ on a wireless device as it is to purchase it on a PC.
3. _____ can be employed to provide secure transmission.
4. Responsibility for network _____ is fragmented among many providers.
5. It is currently impossible to directly access most Web sites with a _____ device.
6. In the future, devices and service systems based on _____ will be able to interoperate.
7. Through m-commerce, companies can reach individual consumers to establish one-to-one _____ relationships.
8. The most successful m-commerce _____ suit local conditions and people's habits and preferences.

9. Companies involved in m-commerce must think through their strategies carefully and ensure that they provide services that truly meet customers _____ .

10. The handheld devices used for m-commerce do have limitations that _____ their use.

Task 4. Find a word in the text that corresponds to the definition.

1. The connection between a user and a machine.
2. Of inconsistent quality.
3. A restriction, a boundary, real or metaphorical, caused by something or some circumstance.
4. To work reliably with another system.
5. An agreement between two parties that a stake (usually money) will be paid by the loser to the winner.

Task 5. Discuss the following points.

1. Do you think it's convenient to use m-commerce applications? Why?
2. Can you name any disadvantages of m-commerce?
3. What should be improved in m-commerce to make it more user-friendly?
4. Are people using m-commerce applications in Ukraine? What for?
5. Would you prefer traditional commerce to m-commerce? Give reasons.

E-Commerce Applications

Task 1. Answer the following questions.

1. What is e-commerce?
2. What is the reason for huge popularity of e-commerce?
3. Have you ever used an e-shop? Why?
4. What electronic exchanges do you know?
5. How often do you use the service of online banking?

Task 2. State whether these sentences are true (T) or false (F).

1. E-commerce can't be applied to investment.
2. Web sites can offer many products and services at one Internet location.

3. With an electronic exchange, the business centre may not be a physical building.
4. Today there are a lot of electronic exchanges.
5. Each Web visitor must provide personal data.
6. Online banking customers have a better knowledge of their current balances.
7. It's difficult to conduct marketing via the Internet.
8. The members of all exchanges can have great benefits.
9. One of the biggest advantages of online banking is elimination of long paper work.
10. Many successful companies want to share their experience as for their electronic exchanges.

Task 3. Fill in the gaps with an appropriate word.

Potential customers, technology platform, network, online marketplace, mutual funds, electronic retailing, cybermall, Web browsers, internal costs scrutiny.

1. _____ serves as a platform for an operating system which in turn is a platform for application software.
2. Although _____ are primarily intended to use the World Wide Web, they can also be used to access information provided by web servers in private networks or files in file systems.
3. A market consists of all the _____ sharing a particular need or want and businesses that are willing to satisfy that need or want.
4. Before the advent of a computer _____ that was based upon some type of telecommunications system, communication between calculation machines and early computers was performed by human users by carrying instructions between them.
5. _____ revenue can come from the sale of products and services, through subscriptions to website content, or through advertising.
6. An electronic, _____ is the place where investors can buy and sell everything they possess.
7. One of the main advantages of _____ is that they give small investors access to professionally managed portfolios of securities, which would be quite difficult to create with a small amount of capital.
8. _____ are costs that a business bases its price on. They include costs like materials, energy, labour, plant and equipment and overheads.

9. _____ offer access to products from a variety of independent retailers.

10. Some criminals seek to evade _____ from government agencies by breaking up a transaction involving a large amount of money into smaller transactions.

Task 4. Find a word in the text that corresponds to the definition.

1. The term is applied in industrial environments in relation to failures in industrial production.

2. A marketing term referring to the division of buyers into groups that have common needs.

3. A type of business where buying and selling of product or service is conducted over electronic systems such as the Internet and other computer networks.

4. A collective investment scheme that aims to replicate the movements of an index of a specific financial market.

5. An electronic forum where trade market information can be shared.

Task 5. Match the words with the following definitions.

| | |
|---------------------------------------|--|
| 1 auction | a method of billing via the Internet |
| 2 electronic bill presentation | b one who acts as an intermediary in a sale or other business transaction between two parties |
| 3 economy of scale | c a special service where buyers place bids for items |
| 4 cybermall | d the cost advantages that enterprises obtain due to size |
| 5 broker | e a Web site that links to hundreds of online shopping sites |

Task 6. Discuss the following points.

1. Why electronic retailing has become so popular?
2. What types of businesses use e-commerce applications?
3. What are the main advantages and disadvantages of electronic exchange?
4. What are the main advantages and disadvantages of online banking?
5. Are bidding auctions popular in our country? Why? Why not?

Technology Infrastructure. Hardware. Web Server Software

Task 1. Answer the following questions.

1. What must technology infrastructure components be chosen carefully and integrated to?
2. What does the amount of storage capacity and computing power depend primarily on?
3. What fundamental services does Web server software perform?
4. What is placed into a Web log file for future analysis?
5. What features do Web site development tools include?

Task 2. State whether these sentences are true (T) or false (F).

1. IS staff workers never do much guesswork to estimate how much traffic the site will generate.
2. Many companies decide that using a third-party Web service provider is the best way to meet initial e-commerce needs.
3. Web servers support encryption processes for transmitting private information securely over the public Internet.
4. A denial-of-service attack is one of the most difficult Internet threats and can be costly if it knocks an e-commerce site out of commission.
5. The use of open database connectivity does not enable the Web server to assemble information from different database management systems.

Task 3. Fill in the gaps with an appropriate word.

Web server hardware, business disruption, Web page construction software, static Web pages, dynamic Web pages, access, Web server software, security and identification, Internet service providers, Web site tracking.

1. There must be adequate hardware backup to avoid a major _____ in case of a failure of the primary Web server.
2. Access controls provide or deny _____ to files based on the user name or URL.
3. Which Web site development tools are bundled with the Web server software depends on which _____ _____ _____ you select.
4. In addition to the _____ _____ _____ each e-commerce Web site must have a Web server to perform a number of fundamental services.

5. In addition to managing _____ services, Web sites must be designed to protect against malicious attacks.

6. One effective means of protecting against DOS attacks is to use _____ that offer some safeguards against such malicious attacks.

7. Web server software includes security and identification, retrieval and sending of Web pages, _____, Web site development, and Web page development.

8. _____ are built in response to a specific Web site visitors' request.

9. _____ are based on the current product information.

10. _____ uses Web editors and extensions to produce Web pages – either static or dynamic.

Task 4. Find a word in the text that corresponds to the definition.

1. A file that contains information about visitors to a Web site.

2. Web pages that always contain the same information.

3. Web pages containing variable information that are built in response to a specific Web visitor's request.

4. Tools used to develop a Web site, including an HTML or a visual Web editor, software development kits, and Web page upload support.

5. Software that uses Web editors and extensions to produce both static and dynamic Web pages.

Task 5. Match the words with their definitions.

| | |
|--------------------|---|
| 1 customer | a possible losses; price to be paid for a thing |
| 2 supplier | b a person who users, buys a manufactured good on the Internet |
| 3 business partner | c a person who buys things, esp. one who gives his custom to a shop |
| 4 e-commerce | d the user's name |
| 5 online consumer | e a person or a firm providing goods, materials, etc. |
| 6 transaction | f a denial-of-service attack |
| 7 visitor | g a person who visits |
| 8 costs | h a business deal |
| 9 URL | i trade, exchange and distribution of goods online |
| 10 DOS attack | j a person who takes part with another or others in some activity, esp. one of the owners of a business |

Task 6. Choose the best appropriate word for each sentence.

1. Online consumers complain that poor Web site performance drives them to abandon some e-commerce sites _____ those with better, more reliable performance.

a) *under favor of;* b) *in favor of;* c) *on behalf of;* d) *to the account of.*

2. Service providers are more able _____ and choke off traffic directed at specific IP addresses.

a) *to detect;* b) *to discover;* c) *to find out;* d) *to define.*

3. Web site development tools _____ features such as an HTML/visual Web page editor, software development kits that include sample code and code development instructions for languages such as Java or Visual Basic, and Web page upload support to move Web pages from a development PC to the Web site.

a) *include;* b) *contain;* c) *provide;* d) *consist.*

4. During a denial-of-service (DOS) attack the attacker takes command of many computers on the Internet and uses them to flood the target Web site with requests for _____ and other small tasks, preventing the target machine from serving legitimate users.

a) *information;* b) *facts;* c) *data;* d) *figures.*

5. Web servers capture visitors' information, including who is visiting the Web site (the visitor's URL), what search engines and _____ they used to find the site, how long their Web browser viewed the site, what the date and time of each visit was, and which pages were displayed.

a) *codes;* b) *keywords;* c) *passwords;* d) *watchwords.*

Task 7. Discuss the following points.

1. For e-commerce to succeed, a complete technology infrastructure must be in place. What are the key technology infrastructure components?

2. What is a key decision facing new e-commerce companies? Why is it so burning a problem for them nowadays?

3. Why are security and identification services essential for intranet Web servers? What are they designed for? Are there any means of protection against DOS attacks?

4. What does the Web server program do in response to client requests that are sent using HTTP?

5. What is the difference between static and dynamic Web pages?

An Overview of Transaction Processing Systems

Task 1. Answer the following questions.

1. What do transaction processing systems do? What do these systems include?
2. What is the result of processing business transactions?
3. What do Automated TPSs consist of?
4. What organization has the busiest transaction processing system in the world? Why?
5. How do companies ensure further organizational success?
6. What does value mean depending on the customer?
7. Why do the TPSs play a critical role in providing value to the customer?
8. How can shippers and receivers provide timely and accurate data on the exact location of a package?
9. What is a batch processing system? What is the essential characteristic of it?
10. What is online transaction processing (OLTP)?
11. What is a compromise between batch and online processing?
12. What are the specific objectives that organizations expect their TPS to accomplish?
13. By meeting these objectives, what corporate goals can TPSs support?
14. What are all business activities that result from customer orders?
15. What can ease the burden of handling the increased workload?
16. What problem do E-commerce companies face? How can it be solved?
17. Why do businesses need transaction monitoring software or an application-monitoring system?
18. What daily tasks do the company's investment advisers use the system for?
19. What does a transaction processing cycle include or what are the major activities of a TPS?
20. What is an example of source data automation?
21. What are the major business documents that TPSs provide?

Task 2. State whether these sentences are true (T) or false (F).

1. Transaction processing systems include accounts payable, accounts receivable.
2. Automated TPSs consist of customer orders, purchase orders, receipts.
3. Computer Associate processes 51,448 transactions per second at peak workloads.
4. TPSs support the routine, day-to-day activities that help a company add value to its products and services.
5. the TPSs often perform activities related to customer contacts.
6. Shippers and receivers are able to provide timely and accurate data on telecommunications, people, procedures, software, and hardware devices.
7. With computerized transaction processing systems business transactions are prepared for processing as a single unit or batch.
8. Online transaction processing is absolutely essential for airlines, ticket agencies, and stock investment firms.
9. OLTP is a way to add value to the company's activity in the eyes of the customer.
10. Payroll transactions and billing are typically done via online transaction processing.
11. The primary objective of any TPS is to produce a variety of documents related to routine business activities.
12. Aleri's data-management software can process 51,448 transactions in a fraction of the time.
13. Because humans are fallible, the transactions were often inaccurate.
14. E-commerce companies face the problem of fraudulent transactions when struggling to handle the increased workload.
15. Manual transaction processing systems can take a fraction of the time to produce routine documents.
16. The ability to conduct business transactions quickly can be very important for an organization's routine documents.
17. A number of transaction processing systems can monitor how timely a company is when processing transactions.
18. Business transaction monitoring software enables managers to discover opportunities for improved transaction flow.
19. Transactions can be processed in seconds rather than overnight, thus improving companies' cash flow.

20. Before computers existed, employees visually inspected all the documents and reports introduced into or produced by the TPS.

21. A firm's transaction processing systems is often the means for customers to communicate.

22. A goal common to almost all organizations is to enable moviegoers to buy tickets over the Internet.

23. The process of capturing and gathering all data necessary to complete a transaction can be done automatically via special input devices.

24. The store's inventory and purchase databases record the number of units of an item purchased.

25. A data correction involves performing data editing for validity and completeness.

26. In a payroll TPS data manipulation includes overtime calculations, federal and state tax withholdings.

27. TPSs produce invalid business documents that help managers and employees perform various activities.

Task 3. Fill in the gaps with an appropriate word.

Benefit, data editing, manipulation, fraudulent, digital, soft-copy (on-screen) production, processing, activities, according, to mean, invoicing, access, computerized, update, OLTP, goals, improvements, performance, updated, TPSs, transactions, workload, data input,

1. The result of processing business transactions is that the organization's records are _____ .

2. The _____ include data collection, data editing, data correction, data manipulation, data storage, and document reduction.

3. The U.S. Bureau of Customs and Border Protection processes lots of transactions per second, _____ a marketing research and consulting firm.

4. Depending on the customer, value may _____ higher quality, or uniqueness of product.

5. The TPSs often perform _____ and order processing.

6. Shippers and receivers can _____ an online database and find the package's current location.

7. When _____ transaction processing systems first evolved, only the method of batch processing was available.

8. Stock investment firms require data quickly and _____ it often.

9. Increasingly, companies are using the Internet to perform many _____ functions.
10. Specific _____ of the organization define the method of transaction processing.
11. Business activities results in _____ that are processed by the TPS.
12. IS infrastructures of many businesses are struggling to handle the increased _____ .
13. One objective of any TPS is _____ and processing
14. An important component of data integrity is to avoid _____ transactions.
15. Some believe that _____ certificates, which use complex mathematical codes, are almost fraud-proof.
16. _____ in information technologies allow transactions to be processed in a matter of seconds.
17. Some monitoring software packages can compare actual _____ with corporate goals and objectives.
18. Today, organizations have implemented _____ to substantially reduce clerical and other labor requirements.
19. A competitive advantage provides a significant and long-term _____ for the organization.
20. An important step in processing transaction data is to perform _____ for validity and completeness.
21. Data _____ can include summarizing results, and storing data in the organization's database for further processing.
22. Document _____ involves generating output records and reports.
23. Important business documents may be hard-copy paper reports or _____ reports.

Task 4. Match the words with their definitions.

| | |
|--|--|
| <p>1 a transaction processing system (TPSs)</p> | <p>a a cabinet department of the United States federal government, created with the primary responsibilities of protecting the United States of America from and responding to terrorist attacks, man-made accidents, and natural disasters</p> |
|--|--|

| | |
|---|---|
| 2 computer-based formation system (CBIS) | b the computer-to-computer exchange of business documents in a standard electronic format between business partners |
| 3 the U.S. Bureau of Customs and Border Protection | c an optical machine-readable representation of data relating to the object to which it is attached |
| 4 the U.S. Department of Homeland Security (DHS) | d a computerized system that performs and records daily routine transactions necessary to conduct business |
| 5 a marketing research and consulting firm | e is a small computer file that serves as both an ID card and a signature |
| 6 batch processing systems | f the largest law enforcement agency in the United States |
| 7 online transaction processing | g is a computer database system that balances and controls purchases of goods and services within a business network |
| 8 online entry with delayed processing | h a financial software application specifically designed to deliver a cost-effective, flexible, and controlled world-class global support service for treasury, payments, and cash-management activities |
| 9 Aleri's Glorai Banking Solution (GBS) | i a system where data are collected together in a batch before processing starts |
| 10 a digital certificate | j creates winning strategy for growth—whether you need to understand market dynamics, identify new opportunities, or increase your profitability |
| 11 bottom line | k processing that supports the daily business operations. Data are processed as soon as a transaction occurs |
| 12 application-monitoring system (transaction monitoring software, monitoring software packages) | l a circle that the business data captured and processed by TPSs goes through |
| 13 EDI systems Electronic Data Interchange | m help(s) you optimize IT infrastructure performance and availability, manage operating systems, databases and servers in distributed and host environments |

| | |
|---|---|
| 14 a transaction processing cycle | n data is input as the transaction occurs and is stored online, but files are not updated |
| 15 data collection | o The process of capturing and gathering all data necessary to complete a transaction |
| 16 UPC bar code or Universal Product Code | p a company's net earnings, net income or earnings per share (EPS). Any actions that may increase/decrease net earnings or a company's overall profit |
| 17 RFID tag (Radio Frequency Identification) | q is a microchip combined with an antenna in a compact package. The antenna picks up signals from an RFID reader or scanner and then returns the signal, usually with some additional data (like a unique serial number or other customized information) |

Task 5. Discuss the following points.

1. What do Transaction Processing Systems (TPSs) mean for businesses?
2. Give some example of a business transaction.
3. What features are considered important in evaluating transaction processing systems?
4. Consider the advantage and disadvantage of transaction processing systems.
5. What are the functions of TPSs?
6. Think over advantages and disadvantages of a batch processing system.
7. What is on-line transaction processing?
8. What are the benefits of EDI?
9. Discuss the objectives, the purposes, the benefits of TPS.

**Control and Management Issues.
Business Continuity, Disaster Recovery**

Task 1. Answer the following questions.

1. What is the backbone of any organization's information system?
2. Which facts do TPSs capture?

3. What happens to most organizations if their TPSs fail?
4. What does business continuity planning identify?
5. How can disasters be classified?
6. What is one of the first steps of business continuity planning?
7. Companies vary widely in the effectiveness of their business continuity planning, don't they?
8. What does disaster recovery focus on?
9. What did the company's (hit by a tornado in May 2003) business continuity plan hinge on?
10. What actions were taken to restore the company in three days?

Task 2. State whether these sentences are true (T) or false (F).

1. TPSs capture only facts about the fundamental business operations of the organization?
2. Business continuity planning identifies the computer software to be restored in the event of a disaster?
3. The examples of business processes that must be resumed as quickly as possible can be order processing.
4. Effectiveness of the business continuity planning in different companies does not vary.
5. Company's disaster recovery plan is a guarantee of overcoming a likely disaster.

Task 3. Fill in the gaps with an appropriate word.

Fire drill, business continuity planning, blackout losses, disaster recovery, TPSs.

1. In addition the data captured by the _____ flow, downstream to other systems in the organization.
2. Business managers should hold an unannounced "test disaster" similar to a _____.
3. _____ also involves disaster preparedness.
4. _____ to workers and investors were estimated to be \$4.2 billion.
5. _____ focuses on the actions that must be taken to restore computer operations and services in the event of a disaster.

Task 4. Find a word in the text that corresponds to the definition.

1. Disturbance or problems which interrupt an event, activity or process.
2. Able to be read or deciphered.
3. A sudden event, such as an accident or a natural catastrophe, that causes great damage or loss of life.
4. Help or support.
5. A failure of electrical power supply.

Task 5. Match the words with their definitions.

| | |
|---------------------|---|
| 1 restore | a the removal of writing, recorded material or data |
| 2 erasure | b pieces of equipment or services that are provided for a particular purpose |
| 3 facilities | c a period when equipment is closed down |
| 4 havoc | d bring back or re-establish (a previous right, practice or situation) |
| 5 outage | e widespread destruction |

Task 6. Discuss the following points.

1. Business continuity planning does little good in case of natural emergencies.
2. It doesn't matter what the first steps of business continuity planning will be.
3. Companies can afford to go unprepared for operational outages.
4. Disaster recovery plans require huge sums but can be never used.
Why to spend money?
5. Backups of critical information should be stored off-site.

**Traditional Transaction Processing Applications.
Order Processing Systems. Order Entry. Sales Configuration**

Task 1. Answer the following questions.

1. What are the components of order processing systems?
2. Describe the process of ordering products.

3. What is an open order?
4. What is Electronic Data Interchange?
5. What is the sales configuration system?

Task 2. State whether these sentences are true (T) or false (F).

1. The order processing system captures the basic data needed to process the customer order.
2. Orders come only through the Internet.
3. Order processing systems can also suggest related items for order takers to mention to promote add-on sales.
4. The order processing TPS of the supplier companies and the purchasing TPS of the customers could be linked indirectly through a third-party clearinghouse.
5. Nowadays, fewer companies are using EDI to make paperless business transactions a reality.
6. Without a sales configuration program, a sales representative might sell a customer the wrong cable or forget the LAN card.
7. Sales configuration programs don't suggest optional equipment.
8. Sales configuration software can also solve customer problems and answer their questions.
9. Sales configuration programs cannot eliminate mistakes, reduce costs and increase revenues.
10. With EDI, orders can be placed anytime of the day or night.

Task 3. Fill in the gaps with an appropriate word.

Represented, back order, available, flow, generate, shipment, eliminate, determine, captured, costs.

1. The goods are ready for ____.
2. Local businesses are well ____ on the committee.
3. The company has ____ 90 % of the market.
4. She lost control and the tears began to ____.
5. Those items are a ____ and we're not sure when they will be in.
6. We need someone to ____ new ideas.
7. Credit cards ____ the need to carry a lot of cash.
8. We set out to ____ exactly what happened that night.

9. We have had to raise our prices because of rising _____.

10. Further information is _____ on request.

Task 4. Find a word in the text that corresponds to the definition.

1. The equipment and programs that form a computer system and the way that these are set up to run.

2. A system that is used in business for sending information between different companies' computer systems.

3. An order for a product that is not yet available.

4. A piece of paper that shows that goods or services have been paid for.

5. A piece of business that is done between people, especially an act of buying or selling.

Task 5. Match the words with their definitions.

| | |
|------------------------|---|
| 1 to replenish | a to send an electronic signal, radio or television broadcast, etc. |
| 2 shipping | b to make something shorter; to become shorter |
| 3 output | c the activity of carrying people or goods from one place to another by ship |
| 4 to transmit | d the act of sharing or exchanging something, especially ideas or information |
| 5 to shorten | e to increase or further improve the good quality, value or status of somebody/something |
| 6 to accomplish | f to make something full again by replacing what has been used |
| 7 to ensure | g to succeed in doing or completing something |
| 8 interchange | h the amount of something that a person, a machine or an organization produces |
| 9 to enhance | i a company or business |
| 10 enterprise | j to make sure that something happens or is definite |

Task 6. Discuss the following points.

1. Give a description of an order entry system.
2. What are the advantages and disadvantages of an order processing system?
3. What is the importance of EDI?
4. What does the planning system consist of?
5. What is the difference between an open order and a back order?

**Traditional Transaction Processing Application.
Shipment Execution, Routing and Scheduling**

Task 1. Answer the following questions.

1. Why is it necessary to coordinate the outflow of all products from the organization with the objective of delivering quality products on time to customers?
2. What is the shipment department responsible for?
3. Why cannot sometimes orders be filled exactly as specified?
4. What transactions specify exactly what items were shipped?
5. What does the scheduling system determine?

Task 2. State whether these sentences are true (T) or false (F).

1. Sometimes orders can be filled exactly as specified.
2. Sometimes it can be difficult to get the data needed to support the effective use of the CKM system.
3. GM build a Webportal to make it much difficult for dealers to order vehicles.
4. The scheduling system determines the best time to pick up or deliver goods and services.
5. A routing system helps to determine the best way to get products from one location to another.

Task 3. Fill in the gaps with an appropriate word.

Picking, routine, accounts, ensure, determine, accessed, mail, warehouse, distribution, support.

1. The delivery system can include _____ services.

2. A computer-generated pick list directs _____ workers to pick certain products.

3. A routing system helps to _____ the best way to get product from one location to another.

4. _____ companies must also determine the use of their resources.

5. Scheduling and _____ programming are connected to the organization order.

6. The technology _____ that drivers cover the fewest miles in the shortest time.

7. Sometimes it can be difficult to get the data needed to _____ the effective use of a CRM system.

8. The system receives the _____ list from the shipment planning system.

9. Most CRM systems can now be _____ via wireless devices.

10. Until now, relationships with business partners have been managed through separate _____ .

Task 4. Find a word in the text that corresponds to the definition.

1. Unwilling and hesitant.
2. The sale of goods to the public in relatively small quantities.
3. A large vehicle that is used to transport goods.
4. A particular order or arrangement of succession.
5. The preservation or upkeep of buildings and machinery.

Task 5. Match the words with their definitions.

| | |
|-----------------------|---|
| 1 handle | a carrying out or putting into effect of a plan, order or course of action |
| 2 vehicle | b a large building where raw materials or manufactured goods are stored |
| 3 execution | c the way in which two or more concepts, objects or people are connected |
| 4 warehouse | d to have the ability to deal with a problem or situation |
| 5 relationship | e a machine with an engine for example a bus, car or truck |

Task 6. Choose the best appropriate word for each sentence.

Dataloy VMS is an advanced and comprehensive software system for voyage management at all its stages. Recognised for its flexible structure and user-friendly interface, Dataloy VMS is the core (1)_____ of leading shipping companies worldwide.

Reliable decision support in Chartering and Operations

Making the (2)_____ at the right time is the key to making voyage management good business. The main focus of Dataloy VMS is to provide high quality decision support based on accurate and reliable information about distances, ports, suppliers, fuel prices and all the other parameters that must (3)_____ to make good business decisions, both in Chartering and Operations.

Timesaving Post Fixture and Accounting

Full integration makes Post Fixture so much easier because the relevant data is already entered during Chartering and Operations. Dataloy VMS also integrates seamlessly with your accounting system.

Fact-based planning

Budgeting, forecasting, scheduling voyages – any planning for the future must consider the facts of the past. Dataloy VMS provides planning tools powered by your own business experience.

User-friendly

Making complex data comprehensible is all about structure and presentation. Dataloy VMS has been developed from the user's perspective (4)_____ that you get an accurate picture and not a just jumble of confusing information. Consideration for the user also extends to the input side, which means that you will never have to enter the same data twice, for instance.

Easy to learn

Dataloy VMS is an integrated system, not a patchwork of modules. The simplicity and consistency of the working environment is one of the reasons why new clients start using Dataloy VMS with a minimum of training time.

Structured yet flexible

The intelligent and consistent structure of Dataloy VMS is its main advantage, but the system still has the flexibility to handle a vast spectre of scenarios within all segments of the industry.

Powerful reporting

The overall data structure of Dataloy VMS is ideal for reporting. The system offers a wide range of standard reports and is also accessible for custom queries from your own reporting tools.

Security and auditing features

Dataloy VMS has been developed with a strong focus on information security. The system (5)_____ detailed control of user privileges, both input and output. Who can access the data, who can change the data – it's all at your fingertips down to individual buttons and fields. The system also provides an Audit Log that gives you the complete history of all user interaction with the system.

1. a) *choice;* b) *making an answer;* c) *system solution.*
2. a) *judgement;* b) *right decisions;* c) *conclusion.*
3. a) *be entered;* b) *be penetrated;* c) *be considered.*
4. a) *occur;* b) *happen;* c) *to ensure.*
5. a) *provides;* b) *supplies;* c) *yields.*

Task 7. Discuss the following points.

1. Define the shipment execution system.
2. Compare the shipment execution system with routine and scheduling.
3. Furnish examples of routine and scheduling.
4. Describe routing and scheduling.
5. Explain the difference between shipment and routing and scheduling.

Purchasing Systems. Inventory Control. Purchase Order Processing

Task 1. Answer the following questions.

1. What kinds of inventory can you name?
2. How can purchase order processing system facilitate the activities in a company?

3. What is the function of the Internet and other public networks in the present-day operation of companies?

4. How does the SeaPort system function?

5. How are suppliers chosen within the SeaPort system?

Task 2. State whether these sentences are true (T) or false (F).

1. Every day manufacturers must know which amount of inventory they have or must buy in order to produce goods.

2. The purchase order processing system enables after-sales departments to complete their transactions effectively.

3. The increased use of telecommunications has simplified access to data.

4. An Internet exchange is formed by two or more companies from different industries and are closed to the rest of the companies.

5. Most companies prefer to form strategic partnerships with major suppliers rather than search for the lowest prices in the list of suppliers.

Task 3. Fill in the gaps with an appropriate word.

Electronic bidding event, purchase order processing system, profitability targets, public networks, supplies, replenishment system, purchasing costs, submit, conduct, Internet exchange.

1. The manufacturers may incur costs and fail to achieve _____ if they don't track current inventory.

2. The implementation of automated _____ to track inventory may simplify scheduling and reduce inventory.

3. The _____ helps the purchasing department to complete transactions efficiently.

4. Companies purchase the _____ they need through the Internet and the Internet exchange.

5. Sending orders via EDI reduces _____ and helps companies to maintain the needed inventory levels.

6. Technologies like the Internet and _____ allow managers to compare products and prices listed in online catalogues.

7. When the formal purchase requisition is approved an _____ is created.

8. When the contractors _____ bids the program users evaluate proposals on multiple criteria.

9. The ability to _____ electronic commerce following EDI standards is one of the key factors of the electronic purchase system functioning.

10. Several companies form _____, which is open to all companies in the industry.

Task 4. Find a word in the text that corresponds to the definition.

1. Material that came from nature and is in an unprocessed or minimally processed state.

2. A communications network that can be used by anyone, usually on a fee basis.

3. Movement of inventory from product storage locations to storage, picking and shipment locations.

4. Business-to-business purchase and sale of supplies and services over the Internet.

5. Offer (often competitive) or setting a price a person or company is willing to pay for something, made at an online auction.

Task 5. Match the words with their definitions.

| | |
|---|---|
| 1 inventory | a a current liability account showing amounts payable by a firm to suppliers for purchases of materials, stocks, or services on credit |
| 2 maintenance | b to remove or take out; get rid of sth |
| 3 account payable | c to make easier; assist the progress of sth |
| 4 to eliminate | d an amount available for use; stock |
| 5 purchase order processing system | e movement of inventory from product storage locations to storage, picking and shipment locations |
| 6 supplies | f a system that helps purchasing departments to speed up transactions |
| 7 raw material | g the amount or value of a firm's current assets that consist of raw materials, work in progress, and finished goods; stock |

| | |
|-------------------------|---|
| 8 to facilitate | h business-to-business purchase and sale of supplies and services over the Internet |
| 9 e-procurement | i the correction or prevention of faults by a program of inspection and the replacement of parts |
| 10 replenishment | j material that came from nature and is in an unprocessed or minimally processed state |

Task 6. Discuss the following points.

1. What can inventory control system malfunction in a company lead to?
2. What is the role of purchase order control systems in everyday company functioning?
3. What are the main advantages and disadvantages of Internet exchanges?
4. What are the possible weaknesses of the SeaPort system?
5. Think of the Ukrainian Internet Exchange system. How does it function?

Receiving. Accounts Payable

Task 1. Answer the following questions.

1. What are the functions of the receiving department in a company?
2. How does the receiving system of many companies work?
3. How does the accounts payable system work?
4. What do accounts payable checks include?
5. What is B2B commerce?

Task 2. State whether these sentences are true (T) or false (F).

1. The receiving department is responsible for inspecting incoming items and notifying the sales department about their delivery.
2. The important function of the majority of receiving departments is quality control by inspection.
3. Input from the purchase order processing system provides manual record to update accounts payable database.
4. When the department receives a bill from a supplier, this bill is checked for accuracy.
5. Reconciliation of purchase orders and supplier invoices is a time-consuming manual process.

Task 3. Fill in the gaps with an appropriate word.

XML data format, cash flow, bar code, inventory costs, receiving system, manual data entry, routing, workflow, liability, to consolidate.

1. An advance shipment notice is basic input to _____ to create a record of future receipts.

2. Receiving department is responsible for _____ the received items to those who ordered them.

3. At the receiving dock the _____ on the container and a transaction is sent to the receiving system.

4. Additional check of bar codes eliminates the need for _____ in order to reduce manual efforts.

5. The accounts payable system improves _____ and provides effective management of current liabilities.

6. Records of accounts payable help to create a _____ record that shows that the firm has agreed to purchase a specific good or service.

7. The information that a typical accounts payable check contains enables the company _____ several bills and invoices into a single payment.

8. Data translation, _____ and storage of actual databases are handled within B2B e-commerce networks.

9. The GXS software translates spreadsheet documents into _____ to make them available online for trading partners.

10. The aim of the accounts payable system is to lower _____ that were expected from online procurement projects.

Task 4. Find a word in the text that corresponds to the definition.

1. A document used to record the amount and type of finished goods or raw materials when a shipment has been accepted.

2. An aspect of the process that consists of activities employed in variability detection and measurement in the characteristics of output attributable to the production system, and includes corrective responses.

3. A notification of deliveries, similar to a packing list usually sent in the electronic format and being a common EDI document.

4. A machine-readable arrangement of numbers and parallel lines of different widths printed on a package, which can be electronically scanned at a checkout to activate computer stock-checking and reordering.

5. A current liability account showing amounts payable by a firm to suppliers for purchases of materials, stocks, or services on credit.

Task 5. Match the words with their definitions.

| | |
|---------------------------|---|
| 1 purchasing | a a notification of deliveries, similar to a packing list usually sent in the electronic format |
| 2 to route | b to send or to divert in a specified direction |
| 3 receiving report | c an aspect of the process that includes variability detection and measurement in the characteristics of output attributable to the production system, and includes corrective responses |
| 4 receiving system | d to check or determine the correctness or truth of by investigation, reference |
| 5 shipment notice | e a system that creates a record of expected receipts |
| 6 to verify | f trade between commercial organizations rather than between businesses and private customers |
| 7 bar code | g obtaining goods by payment |
| 8 quality control | h a document used to record the amount and type of finished goods or raw materials when a shipment has been accepted |
| 9 invoice | i a machine-readable arrangement of numbers and parallel lines of different widths printed on a package, which can be electronically scanned |
| 10 B2B commerce | j a document issued by a seller to a buyer listing the goods or services supplied and stating the sum of money due |

Task 6. Discuss the following points.

1. Why is centralized receiving control system important for a company?
2. What are other ways to control the quality of goods received?
3. What are possible advantages of the centralized receiving system and the accounts payable system?
4. Is it possible to eliminate completely manual work in these systems? What can be the implications of fully electronic control systems?

Accounting Systems.

Budget, Accounts Receivable, Payroll, Asset Management, General Ledger

Task 1. Answer the following questions.

1. What do the primary accounting systems include?
2. What is budget? What are the functions of the budget transaction processing system?
3. What tasks does the accounts receivable system perform?
4. What two primary outputs of the payroll system do you know? What are their functions?
5. What does the asset management transaction processing system control?

Task 2. State whether these sentences are true (T) or false (F).

1. A computerized general ledger is designed to allow automated financial reporting and data entry.
2. With asset management software workers have an enterprise-wide view of all the assets across the organization.
3. A typical payroll journal contains a detailed list of all transactions and business activities.
4. The major output of the account receivable application is monthly bills or statements sent to costumers.
5. The reports generated by a general ledger application are used by ordinary people to control their family budget.

Task 3. Fill in the gaps with an appropriate word.

Enterprise-wide, budgeting, the Internet, interfaces, paychecks, list, calculation, capital assets, chart of account, customer.

1. _____ represent major investments for the organization whose value appears on the balance sheet under fixed assets.
2. With asset management software workers have an _____ view of all the assets across the organization.
3. The general ledger application produces a detailed _____ of all business transactions and activities.

4. A key to the proper recording and reporting of financial transaction is the corporation _____ .

5. Like many other transaction processing applications, the payroll application _____ with other applications.

6. A typical payroll journal contains employees' names, the area where employees worked during the week, hours worked, the pay rate, a premium factor for overtime pay, earnings, the earnings type, various deductions, and net pay _____ .

7. Once collected payroll data is used to prepare weekly, biweekly, or monthly employee _____ .

8. Increasingly, companies are using _____ for their accounts receivable application.

9. Upon receipt of payment, the amount due from the _____ is reduced by the amount of payment.

10. In some organizations _____ can be an expensive and time-consuming process of manually distributing and consolidating information.

]

Task 4. Find a word in the text that corresponds to the definition.

1. The money that is available to an organization or person, or a plan of how it will be spent.

2. A book in which a business, bank etc. records how much money it receives and spends.

3. To start using computers and machines to do a job, rather than people.

4. To take action or make changes that you have officially decided should happen.

5. An exact record of the money that a company has received and the money it has spent.

Task 5. Match the words with their definitions.

| | |
|------------------|---|
| 1 capital assets | a information or facts |
| 2 investment | b a description of what is likely to happen in the future, based on the information that you have now |

| | |
|---------------------|--|
| 3 depreciate | c to carefully watch and check a situation in order to see how it changes over a period of time |
| 4 track | d the use of money to get a profit or to make a business activity successful, or the money that is used |
| 5 data | e to record or study the behavior or development of someone or something over time |
| 6 monitor | f the movement of money coming into a business as income and going out as wages, materials etc. |
| 7 forecast | g the greatest or least amount, number, speed etc. that is allowed |
| 8 cash flow | h machines, buildings, and other property belonging to a company |
| 9 limit | i time that you spend working in your job in addition to your normal working hours |
| 10 overtime | j to decrease in value or price |

Task 6. Discuss the following points.

1. How does the automation process help budgeting?
2. How does the accounts receivable system manage the cash flow of the company?
3. Tell what we use the payroll system for.
4. What is corporation chart of accounts? What is its function?
5. Give examples of companies and organizations that use the asset management software. How does this software help them?

Enterprise Resource Planning

Task 1. Answer the following questions.

1. What is ESP (Enterprise resource planning)?
2. How should we start the traditional planning process? What does this forecast include?

3. What is the reason for drawing up a production schedule?
4. What are the advantages and disadvantages of ERP?
5. What does the term "best practices" mean?

Task 2. State whether these sentences are true (T) or false (F).

1. Implementing an ERP system is extremely challenging and requires tremendous amounts of resources.
2. ERP offers many strategic advantages by streamlining a company's TPS's, ERP is time-consuming and is simply and cheap to implement.
3. An ERP doesn't provide an organization with an opportunity to upgrade and simplify the information technology it employs.
4. The production schedule may reveal interesting insights, such as the need to build additional manufacturing capacity, hire additional workers, or develop new suppliers to provide sufficient raw materials.
5. Competition doesn't require companies to structure their business processes to be as effective and customer-oriented as possible.

Task 3. Fill in the gaps with an appropriate word.

Distribution, ERP systems, customer-oriented, centralizing, best practices, the forecast, the data, software product, an integrated database, demand forecasting process.

1. _____ are commonly used in manufacturing companies, colleges and universities, retailers, and healthcare organizations.
2. Some organizations require years to implement an accurate, reliable _____ .
3. _____ are the most efficient and effective ways to complete a business process.
4. ERP systems operate via _____ , using essentially one set of data to support all business functions.
5. _____ and formalizing these decisions enables the organization to eliminate the hodgepodge of multiple hardware platforms, operating systems and databases it is currently using – most likely from a variety of vendors.
6. Picking an ERP system involves not just choosing the best _____ but also choosing the right long-term business partner.

7. Financial and planning systems automatically receive information from manufacturing and _____ .

8. _____ is prepared up to 18 months in advance and attempts to predict the weekly amount of each product to be purchased over this time period.

9. Competition requires companies to structure their business processes to be as effective and _____ as possible.

10. _____ is integrated to provide excellent support for operational decision making and allows companies to provide greater customer service and support, strengthen customer and supplier relationships, and generate new business opportunities.

Task 4. Find a word in the text that corresponds to the definition.

1. The most efficient and effective ways to complete a business process.

2. It's a key factor in instant access.

3. It is a new manufacturing model some companies are considering to avoid problems with the demand-forecast approach just described.

4. It is an estimate of future financial outcomes for a company or country (for futures and currency markets).

5. Any set of machine-readable instructions (most often in the form of a computer program) that directs a computer's processor to perform specific operations.

Task 5. Match the words with their definitions.

| | |
|-------------------------|--|
| 1 ERP | a the most efficient and effective ways to complete a business process |
| 2 beat practices | b commonly used to describe the goods and materials that a business holds for the ultimate purpose of resale (or repair) |
| 3 forecast | c a new manufacturing model some companies are considering to avoid problems with the demand-forecast approach just described |

| | |
|-----------------------------|---|
| 4 inventory | d an important tool for manufacturing and engineering, where it can have a major impact on the productivity of a process |
| 5 lean manufacturing | e a key factor in instant access |
| 6 IT | f an estimate of future financial outcomes for a company or country (for futures and currency markets) |
| 7 scheduling | g the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise |

Task 6. Discuss the following points.

1. What is the purpose of ERP?
2. What software vendors do you know?
3. Why is it important to develop demand forecast?
4. The main advantages and disadvantages of ERP.
5. What does implementation of an ERP system ensure?

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