Ministry of Education of the Republic of Belarus

Educational Institution

Belarusian State University of Informatics and Radioelectronics

The Department of Cross-Cultural Professional Communication

Part-Time Course

Foreign Language (English)

Assignment 2

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**Assignment 2**

1. ***State which of the following sentences are Simple (S), Complex (Cx) or Compound (Cd).* *Points: 10***

1. The term “computer” can be replaced by the more appropriate term “electronic data processing machine”. **S**

2. Worms are self-copying programs; therefore, they have the capacity to move from one computer to another without human help. **Cd**

3. This type of computers has a disc file of extremely high capacity and access speed.\_S

4. Data processing is based on an input-processing-output cycle which is often referred to as the IPOS cycle. **Cx**

5. An information system collects, stores, and processes data; actually, it provides useful, accurate, and timely information. **Cd**

6. If an electronic digital device provides access to information, applications, communications and storage over the Internet, this technology is called Cloud computing. **Cx**

7. Before the problem of designing a non-mechanical printer was resolved, it had been studied in the central research laboratory. **Cx**

8. Deterrents, preventive countermeasures, corrective procedures and detection activities protect information systems from threats. **S**

9. Although no computer system can be 100 % secure, system administrators can undertake some steps to secure computer systems. **Cd**

10. He had many options to fix the bugs; nevertheless, he chose to reinstall this computer program. **Cd**

1. ***Complete the sentences choosing the correct option of Gerund or Infinitive from the table below. Points: 10***

1. I am not used to **a)** the WWW using this search engine.

2. **a)** confidential information across the Internet can be risky.

3. In object-oriented programming data structures are **b)** into units called classes.

4. DSL technology allows digital signals **a)** and the full bandwidth of cabling to be utilized.

5. The engineer suggested **a)** antivirus software to protect our information system.

6. This undergraduate hopes **c)** by this highly competitive company.

7. **b)** how the new programming language works we should evaluate its performance.

8. Artificial Intelligence is a branch of computer science concerned with **c)** computers’ behavior like humans.

9. Justification of a project often involves **b)** problems within an organisation information system.

10. For the data **a)** from an existing computer system into a new system a conversion software should be used.

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | a) navigate | b) navigating | c) to be navigated |
| 2 | a) transmitting | b) transmit | c) being transmitted |
| 3 | a) integrate | b) being integrated | c) to be integrated |
| 4 | a) to be carried | b) carrying | c) to carry |
| 5 | a) installing | b) install | c) being installed |
| 6 | a) employing | b) to employ | c) to be employed |
| 7 | a) being demonstrated | b) to demonstrate | c) demonstrating |
| 8 | a) to make | b) to be made | c) making |
| 9 | a) identify | b) identifying | c) to be identified |
| 10 | a) to be converted | b) to convert | c) converting |

***III. Open the brackets using the correct Participle form. Points: 8***

1. **Finding** its way into your system, the worm made multiple copies of itself and damaged the files.

2. What is the technology **needed** to set up a home network?

3. **Working** with the CAD system, the designer creates the lines and surfaces that form the object and stores this model in the computer database.

4. The user went to the criminals’ server **clicked** a fake link in the e-mail.5. **Creating** a program software developers try to define its purpose.

6. I**mproved** the program was published as an upgraded version.

7. What is the equipment **setting up** in the lab right now designed for?

8. Some pages **adopting** chatbot software make their sites more interactive and friendly.

***IV. Match the terms with their definitions. Points: 6***

|  |  |
| --- | --- |
| 1. Internet of Things | a) It is a device that controls the flow of data within a network and acts as a gateway. |
| 2. HTML | b) With this kind of topology, data travels through several devices and over multiple channels simultaneously. |
| 3. Router | c) It determines the text, images and sounds that become the part of a Web page, and specifies exactly how those elements are displayed. |
| 4. Mesh | d) It is built into applications that transmit data from one digital device to another on the Internet. It is responsible for establishing a connection, transferring packets, and closing the connection when the transmission is complete. |
| 5. Bandwidth | e) It is a system of interrelated computing devices, machines, objects, animals or people provided with unique identifiers and ability to transfer data over a network without human intervention. |
| 6.TCP | f) It is the transmission capacity of a communications channel. |

1.e, 2.c, 3.a, 4.b, 5.f, 6.d

***V. Fill in the gaps using the words given in the box. Points: 7***

1) **Information** systems play a key role in helping organisations achieve goals. Transaction 2) **processing** systems provide an organisation with a way to collect, display, modify, or cancel transactions. 3) **management** information systems are typically built on the data collected by a TPS to produce reports that managers use to make the business decisions needed to solve routine, structured problems. A decision 4) **support** system helps workers and managers make non-routine decisions by constructing decision models that include data collected from internal and external sources. An 5) **expert** system is designed to analyse data and produce a recommendation or decision based on a set of facts and rules called a 6) **data** base. If the rules for an expert system are not known, neural 7) **networks** might be used to enable a computer to «learn» how to make a decision.

***VI. Replace the words in bold with their synonyms from the box.* *Points: 6***

1. A hacker is a skilled programmer who manipulates computers with **harmful** intent. */ vulnerable*
2. When someone gains **unsanctioned** access to your personal data illegally it is called identity theft. */ unauthorised*
3. Trojans can be **embedded** in e-mail attachments, software downloads and even files. */ built-in*
4. Networks with wired and wireless connections are **susceptible** to a variety of threats, including viruses, theft and equipment failure. */ malicious*
5. If your network is not **protected**, hackers can easily connect to it, monitor transmitted data, access connected devices and spread viruses. / *secured*
6. Disaster recovery plans are also **essential** to data security. */ critical*

***VII.******Replace the words in bold with their antonyms from the box.* *Points: 6***

|  |
| --- |
| *cause / eradicate / / reduce* |

1. A recovery plan is a step-by-step plan that describes the methods used to secure data against disasters and sets guidelines for how an organization will **destroy** lost data if and when a disaster occurs. **/ *recover***
2. Your chances of recovering a stolen computer **worsen** if you have taken some steps in advance, such as recording the computer’s serial, number, affixing a tracking label, or installing tracking software. */* ***improve***
3. Antivirus software is a type of utility software that helps to **create** viruses, Trojan horses, worms and bots. ***/ eradicate***
4. The goal of White Hat Hackers is helping businesses to **hide** gaps in networks’ security. ***/ detect***
5. Although bugs typically just **prevent** annoying computer glitches, their impact can be much more serious. **/ *cause***
6. To help **increase** risks, the hardware and software for most corporate information systems are housed in data centers. ***/ reduce***

***VIII. Choose the correct options to complete the sentences. Points: 7***

1. **b)** is an OOP property that enables different objects to deal with the same instruction in different ways.

1. encapsulation
2. polymorphism
3. inheritance

2. A typical visual development **b)** is based on a form design grid that a programmer manipulates to design the user interface for a program.

a) medium

b) environment

c) tool

3. The set of superclasses and subclasses that are related to each other is referred to as **a).**

1. a class hierarchy
2. a set of independent classes
3. a set of classes with a common parent

4. A **c)** error occurs when an instruction does not follow the grammar rules of the programming language.

1. logic
2. runtime
3. syntax

5. **a)** programming focuses on a step-by-step algorithm that instructs the computer how to arrive at a solution.

1. declarative
2. procedural
3. event-driven

6. The OO paradigm defines a (an) **b)** as a unit of data that represents an abstract or a real-world entity.

1. object
2. class
3. attribute

7. In the context of OO paradigm, a class attribute **c).**

1. defines the behavior of an object
2. is used to determine if an object exists
3. defines the characteristics of a set of objects

***IX. Put the fragments of the following sentences into the correct order. Points: 10***

1. Interviews are one of the most popularly used devices for employee selection.
2. A job interview is an interview consisting of a conversation between a job applicant and a representative of an employer which is conducted to assess whether the applicant should be hired.
3. Potential job interview opportunities also include networking events and career fairs.
4. Professional networking sites like LinkedIn have become popular with employers.
5. Before you start your job search make sure you have a clean digital footprint.
6. When you apply for a job, your cover letter and application form that goes with your CV should include important information for employers.
7. Job hunting involves more than searching for open positions and sending your resume to employers.
8. If you are currently employed and looking for a better or different career continue to perform your current job.
9. You might discover unlisted job openings or people might recommend you for future opportunities.
10. If you are just entering the workforce or starting a new career, you might need more training or experience to get a job.

***X. Translate the abstract “Information Systems” into Belarusian/Russian in a written form. Use a dictionary, if needed. Points: 30***

**Информационные системы**

Информационные системы представляют собой комбинацию аппаратного, программного обеспечения и телекоммуникационных сетей, созданных для сбора, хранения и обработки данных. Коммерческие фирмы и другие организации полагаются на информационные системы для выполнения своих операций и управления ими, взаимодействия со своими клиентами и поставщиками и конкуренции на рынке. Информационная система проходит несколько этапов по мере ее разработки, использования и, наконец, вывода из эксплуатации. Эти этапы включены в жизненный цикл разработки системы, обычно называемый SDLC.

1. Планирование. Собрать команду проекта, обосновать проект, выбрать методологию разработки, разработать график проекта, составить план развития проекта.

2. Анализ. Действия на этапе анализа: изучить текущую систему, определить системные требования (для новой или измененной информационной системы) и написать отчет о требованиях. Команда проекта определяет требования путем опроса пользователей и изучения успешных информационных систем, решающих аналогичные задачи. Другой способ определить требования — создать прототип.

3. Дизайн. Команда проекта должна выяснить, как новая система будет соответствовать требованиям, указанным в отчете о системных требованиях. Команда проекта выбирает решение, подбирает аппаратное и программное обеспечение и разрабатывает подробные спецификации приложения.

4. Реализация. На этапе реализации SDLC проектная группа контролирует выполнение задач, необходимых для создания новой информационной системы. Задачи, которые выполняются на этапе внедрения, могут включать: закупку и установку аппаратного и/или программного обеспечения, создание приложений, тестирование приложений, доработку документации, обучение пользователей, преобразование данных в новую систему.

5. Техническое обслуживание. Этап обслуживания является последним и самым продолжительным этапом SDLC и длится до тех пор, пока система не будет выведена из эксплуатации. Он включает в себя повседневную работу системы, внесение изменений для повышения производительности и устранение проблем. Три ключевые концепции обеспечивают высокое качество технического обслуживания: надежность, доступность и удобство обслуживания.