

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И МОЛОДЕЖНОЙ ПОЛИТИКИ
СВЕРДЛОВСКОЙ ОБЛАСТИ

Государственное автономное профессиональное образовательное учреждение
Свердловской области

«ЕКАТЕРИНБУРГСКИЙ ТЕХНИКУМ «АВТОМАТИКА»

Рекомендовано к реализации:

методическим советом,

Председатель методического совета

 Л.Н. Пахомова



ФОНД ОЦЕНОЧНЫХ СРЕДСТВ

ОГСЭ.04 ИНОСТРАННЫЙ ЯЗЫК
ОБЩЕГО ГУМАНИТАРНОГО И СОЦИАЛЬНО-ЭКОНОМИЧЕСКОГО ЦИКЛА

Программа подготовки специалистов среднего звена

Екатеринбург

**ПАСПОРТ
ФОНДА ОЦЕНОЧНЫХ СРЕДСТВ ПО ДИСЦИПЛИНЕ
ОГСЭ.03 ИНОСТРАННЫЙ ЯЗЫК**

Контролируемые темы (разделы) дисциплины	Код контролируемой компетенции	Оценочное средство
Социокультурная сфера.	ОК 1 - 9	Лексико- грамматический тест
Профессиональный иностранный язык.	ОК 1 – 9	Комплект лексических тем Экспертная оценка монологической речи
Информационное общество.	ОК 1 – 9	Лексико-грамматический тест
Развитие микроэлектроники.	ОК 1 – 9	Перевод профессионально-ориентированного текста
История компьютеров.	ОК 1 – 9	Лексико-грамматический тест
Принципы обработки данных.	ОК 1 – 9	Комплект лексических тем Экспертная оценка монологической речи
Компьютерные системы: обзор. Функциональная структура компьютера.	ОК 1 – 9	Лексико-грамматический тест
Память (запоминающее устройство). Центральный процессор (ЦП).	ОК 1 – 9	Грамматическое упражнение
Устройства ввода-вывода. Персональные компьютеры.	ОК 1 – 9	Грамматическое упражнение
Компьютерное программирование.	ОК 1 – 9	Комплект лексических тем Экспертная оценка монологической речи

**ЛЕКСИКО-ГРАММАТИЧЕСКИЙ ТЕСТ
ПО ДИСЦИПЛИНЕ ОГСЭ.04 ИНОСТРАННЫЙ ЯЗЫК**

Типовое задание: Выполните лексико-грамматический тест, отмечая правильный ответ.
Время выполнения – 60 минут.

Раздел 1. Деловой иностранный язык Test 1

Выберите правильный вариант
Choose the correct variant

1. Greg said that ... a new job.
 - he will need
 - he needed
 - would he need

2. Tim complained that he ... at four o'clock in the morning.
 - is working
 - will be working
 - was working

3. He said that he ... that film.
 - had already seen
 - has already seen
 - was seen

4. Anna explained to me that the hairdresser's ... down the road.
 - is located
 - was located
 - locates

5. Charles said that he ... me the following day.
 - would have called
 - will call
 - would call

6. Bill asked me what ... for dinner the day before.
 - I have made
 - I had made
 - had I made

7. He said that If I ... Kathrin, she ... me.
 - ask / will help
 - have asked / would help
 - asked / would help

8. I was worried if ... enough space to buy a new TV set to my room.
 - I would have
 - would I have
 - I will have

9. Alex wondered if ... for the weekend at his place.

- his sister will stay
- his sister was going to stay
- his sister is going to stay

10. I wasn't sure if my purchases ... or not and I didn't know whom to ask about it.

- delivered
- had been delivered
- will be delivered

11. Ben asked him whether he ... a motorcycle.

- could ride
- can ride
- will ride

12. The police officer ... the car.

- orders to stopped
- would order stopping
- ordered him to stop

13. Pam asked him why he ... his job.

- wanted to leaving
- wants to leave
- wanted to leave

14. He said the bus ... a little late that day.

- will be
- might be
- can be

15. Pam ... to the cinema.

- suggested going
- suggests to go
- suggested to go

Test 2

Выберете правильный вариант

Choose the correct variant

1. It was very late, so I ... to bed.

- say I am going
- said I go
- said I was going

2. He said the fire ... a lot of damage to the building.

- had been doing
- will do
- had done

3. Simon was wrong when he said that Andrew ... to his new apartment the next day.

- would have moved
- would be moving
- moved

4. She told him that he ... harder.

- should study
- will study
- can study

5. He said that if he ... so quickly, the accident ... even worse.

- had acted / would be
- had been acting / would be
- hadn't acted / would have been

6. She told us that the new furniture ... the day before.

- had been delivered
- would be delivered
- will be delivered

7. She was worried that her son ... very well that semester.

- isn't studying
- wasn't studying
- doesn't study

8. They warned us that the manager ... the office the following day.

- will inspect
- had inspect
- would inspect

9. He ... the money he had earned.

- demands
- demanded to be given
- demanded to have given

10. He admitted ... my secret.

- having given away
- to give away
- have given

11. He claimed that he ... a prize.

- had won
- had been winning
- will win

12. He complained that he ... enough money to buy such an expensive present.

- doesn't earn
- would not be earning
- didn't earn

13. Our teacher insisted on ... by Friday.

- our finishing
- our to finish
- to finish

14. She explained that she ... him because he was rude.

- liked
- didn't like
- would like

15. He said that Tom was the best student he

- was teaching
- would teach
- had ever taught

Раздел 1. Информационное общество

Tests

1. Вставьте необходимые слова вместо пропусков

1. Information is given into the computer in the form of

_____ a) ideas; b) characters; c) rules

2. The basic function of a computer is _____ information.

a) to switch; b) to keep; c) to process

3. The data needed for solving problems are kept in the

_____ a) memory; b) input device; c) output device

4. Inputting information into the computer is realized by means of _____.

a) a printer; b) letters; c) diskettes

5. A computer can carry out arithmetic-logical operations

_____ a) quickly; b) instantaneously; c) during some minutes

6. Computers have become _____ in homes, offices, research institutes.

a) commonwealth; b) commonplace; c) common room

7. Space _____ uses computers widely.

a) information; b) production; c) exploration

8. Computers are used for image _____.

a) processing; b) operating; c) producing

9. Computers help in _____ of economy.

a) invironment; b) management; c) government.

10. Air traffic control depends on computer-_____ information.

a) generated; b) instructed; c) combined

2. Подберите к терминам, данным в левой колонке, определения, представленные справа

- | | |
|------------------|-------------------------------------------------------------------------------------|
| 1. Computer | a) a machine by which information is received from the computer; |
| 2. Data | b) a device capable of storing and manipulating numbers, letters and characters; |
| 3. Input device | c) an electronic machine that processes data under the control of a stored program; |
| 4. Memory | d) a disk drive reading the information into the computer; |
| 5. Output device | e) information given in the form of characters. |

Раздел 20. История компьютеров

Test 1

Подберите вместо пропусков подходящее по смыслу слово

1. British scientists invented a _____ way of multiplying and dividing.

- a) mechanical; b) electrical; c) optical
- 2. A new branch of mathematics,____, was invented in England and Germany independently.
 - a) mechanics; b) arithmetics; c) calculus
- 3. A young American clerk invented a means of coding____by punched cards.
 - a) letters; b) data; c) numbers
- 4. Soon punched cards were replaced by____terminals.
 - a) printer; b) scanner; c) keyboard
- 5. Mark I was the first____computer that could solve mathematical problems.
 - a) analog; b) digital; c) mechanical
- 6. J. von Neumann simplified his computer by storing information in a____code.
 - a) analytical; b) numerical; c) binary
- 7. Vacuum tubes could control and____electric signals.
 - a) calculate; b) amplify; c) generate
- 8. The first generation computers were____and often burned out.
 - a) uncomfortable; b) uncommunicative; c) unreliable
- 9. Computers of the second generation used____which reduced computational time greatly.
 - a) transistors; b) integrated circuits; c) vacuum tubes
- 10. Due to____the development of the fourth generation computers became possible.
 - a) microelectronics; b) miniaturization; c) microminiaturization

Test 2

Выберите правильный перевод предложений, содержащих неличные формы глагола (Infinitive, Gerund, Participle I, Participle II)

- 1. That was the machine provided with the necessary facts about the problem to be solved.
 - а) Машину обеспечили необходимыми фактами, чтобы она решила проблему.
 - б) То была машина, снабженная необходимой информацией о задаче, которую предстояло решить.
 - в) Эту машину обеспечили необходимой информацией о решаемой задаче.
- 2. The computers designed to use IC were called third generation computers.
 - а) Компьютеры сконструировали для использования ИС и назвали их третьим поколением.
 - б) Компьютеры назывались третьим поколением, потому что в них использовались ИС.
 - в) Компьютеры, сконструированные, чтобы использовать ИС, назывались компьютерами третьего поколения.
- 3. Mark I was the first machine to figure out mathematical problems.
 - а) Первая машина для вычисления математических проблем была Марк I.
 - б) Марк I явилась первой машиной для вычисления математических задач.
 - в) Марк I была первой машиной, которая вычисляла математические задачи.
- 4. Early computers using vacuum tubes could perform computations in milliseconds.
 - а) Первые компьютеры, использующие электронные лампы, могли выполнять вычисления в течение миллисекунд.
 - б) Ранние компьютеры использовали вакуумные лампы, которые выполняли вычисления за миллисекунды.
 - в) Рано компьютеры, использующие электронные трубки, выполняли вычисления за миллисекунды.
- 5. Vacuum tubes to control and amplify electric signals were invented by Neumann.

- а) Изобретенные Нойманом вакуумные лампы регулировали и усиливали электрические сигналы.
 - б) Нойман изобрел электронные лампы для управления и усиления электрических сигналов.
 - в) Электронные лампы, которые регулировали и усиливали электрические сигналы, были изобретены Нойманом.
6. Neumann's machine called the EDVAC was designed to store both data and instructions.
- а) Неймановскую машину, называемую EDVAC, сконструировали для хранения информации и команд.
 - б) Машина Ноймана, названная EDVAC, была создана, чтобы запоминать как информацию, так и команды.
 - в) Машину Ноймана, которая хранила данные и инструкции, назвали EDVAC.
7. Computers were developed to perform calculations for military and scientific purposes.
- а) Компьютеры были созданы, чтобы выполнять вычисления для военных и научных целей.
 - б) Компьютеры создали для выполнения военных и научных вычислений.
 - в) Созданные компьютеры выполняли вычисления военного и научного назначения.
8. An American clerk invented a means of coding the data by punching holes into cards.
- а) Американский служащий изобрел посредством кодирования информации перфокарту.
 - б) Американский клерк изобрел перфокарту, кодируя информацию.
 - в) Американский служащий изобрел средство шифрования информации путем пробивания отверстий в карте.

Раздел 1. Компьютерные системы: обзор. Функциональная структура компьютера

Test 1

Выберите правильный вариант ответа Причастия I.
Choose the correct variant of Participle I:

1. That night, _____ up to his room he thought of his unpleasant duty.
went
going
having go
2. She smiled _____ the joke.
remembered
to remember
remembering
3. _____ so little in the country, I am afraid I cannot answer all your questions.
Seeing
Having seen
To see
4. A new road _____ the plant with the railway station will soon be built.
connecting
having connected
connected
5. _____ two days before the conference he had a lot of time to see Edinburgh.
To arrive

Arriving
Having arrived

6. I felt very tired _____ the whole day in the sun.
being worked
having worked
work

7. He speaks like a _____ his opinion of everything.
man taking
takes

8. _____ that she could trust them she didn't know what to do.
Not having known
Knowing not
Didn't know
Not knowing

9. _____ a pair of gloves we moved to the shoe department.
Boughting
Having bought
Buying

10. She left _____ us all she had found out.
told
telling
having told

11. And _____ this he threw himself back in the armchair.
said
have said
was saying
saying

12. _____ what he wanted he took his hat and left.
Having got
Getting

13. By this time _____ to the atmosphere of the big city, he no longer felt a stranger.
getting used
having got used
got used

14. I spent about ten minutes _____ over the sixteen pages of The Guardian before I found the main news and articles.
turn
having turned
turning

15. I felt refreshed and rested _____ for eight hours.
sleeping
having slept

slept

16. _____so far away he still feels part of the community.
was
be
being

17. The boy came out of the water_____from top to toe.
was shaking
having shaken
shaking

18. _____all our preparations we hired a taxi and hurried off.
Having completed
Completing
Having complete
Completed

19. _____her by the arm he helped her out of the taxi.
Supported
Supporting

20. _____such difficulties she was at a loss.
Never experienced
Having experienced never
Never have experienced
Having never experienced

Test 2

Выберите правильный вариант ответа Причастия II.
Choose the correct variant of Participle II:

1. She enters,_____by her mother.
accompanying
being accompanying
accompanied

2. _____by the crash, he leapt to his feet.
Arousing
Have been aroused
Aroused

3. _____about the bandits, he left his valuables at home.
Warned
Having been warned
Warning

4. _____that they were trying to poison him, he refused to eat anything.
Convincing
Convinced
Convince

5. Tom, _____ at what he had done, could at first say nothing.
horrificed
having horrified
horrifying

6. Jones and Smith came in, _____ by their wives.
followed
following
follow
have followed

7. _____ by the blow, Peter fell heavily.
Stunning
Stunned
Stun

8. The new job _____ to me lately seems to be very interesting.
offered
offering
has offered

9. She looked at the table. There was a loaf of brown bread _____ into two halves
divides
dividing
divided
was divided

10. The animals _____ in the morning struggled furiously.
catched
caught
catching

11. The child _____ alone in the large room began screaming.
leaving
left
leaves

12. _____, the postman refused to deliver our letters unless we chained our dog up.
Bitten twice
Biting twice
Having been bitten twice

13. The centre of the cotton industry is Manchester _____ with Liverpool by a canal.
connecting
connected

14. The story _____ by the old captain made the young girl cry.
tells
told
is telling

15. He didn't doubt that the information_____by morning mail was of great interest to his competitors.
receiving
has received
received

16. The equipment_____in the shop is rather sophisticated.
had installing
installing
installed

17. We've got a great variety of products, which are in great demand. Here are some samples _____to our distributors last month.
sent
sanding
been sent
sended

18. The methods_____in the building of the new metro stations proved to be efficient.
applies
applying
applied
applied

19. She warmed up the dinner that she_____the day before.
cooking
had cooked
has cooked

20. _____by successive storms, the bridge was no longer safe.
Having been weakened
Weakened
Weaking
Had weaked

Test 3

Choose the suitable form of Gerund.

Выберите подходящую форму герундия:

1. I don't mind_____Zac. It's a nice nickname.
calling
being called
having been called

2. The safe showed no sign of_____.
touching
being touched
having been touched

3. Our teacher suggests_____test next week.
writing
being written

having been written

4. I really appreciate _____ this opportunity. I'll do my best.

giving
being given
having been given

5. She strongly objected to our _____ a fire.

making
being made
having been made

6. The child was punished by _____ to bed without dinner.

sending
being sent
having been sent

7. He was clever enough _____ in this delicate situation.

avoiding, speaking
to avoid, to speak
avoiding, to speak
to avoid, speaking

8. I wonder if there is any use _____ the results.

trying, improving
trying, to improve
to try, to improve
to try, improving

9. I used a car to get to work, and now I can't get used to _____ by bus.

go
going

10. Do you remember _____ your last exam? Was it hard?

take
to take
taking

11. I don't feel like _____ this article today.

reading and to translate
to read and translating
reading and translating

12. The little girl was really afraid of _____ lost in the forest.

having been
getting
having got

13. Is there anything here worth _____?

buying
being bought
having been bought

14. He disliked_____coming home late.

I

Me

15. Would you mind_____smoking here?

not

not to

no

don't

16. We stopped_____some food in the store, because we'd run out of our supplies.

buying

to buy

having bought

17. What about_____to the cinema tomorrow?

to go

going

having gone

18. _____you here was a great surprise to me.

finding

having found

19. The friends couldn't_____laughing when they discovered the problem.

assist

help

aid

support

20. I can't_____standing in queues.

stand

fall

sit

lie

Контролируемые компетенции:

OK 1- 9

Критерии оценки:

Отлично	Хорошо	Удовлетворительно	Неудовлетворительно
Все задания теста выполнены	Выполнено 60 – 70% заданий теста	Выполнено 50% заданий теста	Выполнено менее половины заданий

КОМПЛЕКТ ЛЕКСИЧЕСКИХ ТЕМ ПО ДИСЦИПЛИНЕ ОГСЭ.03 ИНОСТРАННЫЙ ЯЗЫК

Типовое задание: Расскажите в виде монологической речи основное содержание темы. Можно использовать план или вербальные опоры в виде отдельных слов (но не предложений).

Раздел 2. Профессиональный иностранный язык

- 1.) Лексическая тема «Я хочу стать программистом»
 - 2.) Лексическая тема «Что такое компьютер?»
 - 3.) Лексическая тема «Аппаратное обеспечение»
 - 4.) Лексическая тема «Устройства обработки данных»
 - 5.) Лексическая тема «Память: оперативное запоминающее устройство и постоянное запоминающее устройство»
 - 6.) Лексическая тема «Устройства хранения данных: жесткий диск (винчестер), дискета, накопитель на компакт-дисках (CD)»
 - 7.) Лексическая тема «Типы микропроцессоров»
 - 8.) Лексическая тема «Выходные устройства отображения данных: монитор, принтер, модем»
 - 9.) Лексическая тема «Клавиатура. Устройство для перемещения объектов на экране («мышь»)»
 - 10.) Лексическая тема «Виды программного обеспечения: системное программное обеспечение и прикладное программное обеспечение»
- Лексическая тема «Работа ПК»

Раздел 4. Принципы обработки данных

1. Лексическая тема «Обработка данных»
2. Лексическая тема «Системы обработки информации»
3. Лексическая тема «Компьютерная система обработки информации. Схема»
4. Лексическая тема «Основные операции обработки данных»
5. Лексическая тема «Последовательность запоминания данных»
6. Лексическая тема «Преимущества компьютерной обработки данных»
7. Лексическая тема «Интересные факты о первых компьютерах: The ENIAC»
8. Лексическая тема «Интересные факты о первых компьютерах: The EDVAC»
9. Лексическая тема «Интересные факты о первых компьютерах: The VNIVAC I»

Раздел 4. Компьютерное программирование

- 1.) Лексическая тема «Структура компьютерной системы»
- 2.) Лексическая тема «Типы компьютеров»
- 3.) Лексическая тема «Аппаратное обеспечение, программное обеспечение, встроенное программное обеспечение»
- 4.) Лексическая тема «Развитие компьютеров в России»
- 5.) Лексическая тема «Функциональные элементы цифрового компьютера»
- 6.) Лексическая тема «Память. Устройство памяти»
- 7.) Лексическая тема «Центральный процессор (ЦП). Основные компоненты ЦП»
- 8.) Лексическая тема «Микропроцессор – мозг аппаратного обеспечения»
- 9.) Лексическая тема «Устройства ввода информации»
- 10.) Лексическая тема «Устройства вывода. Принтеры. Типы принтеров»
- 11.) Лексическая тема «Устройства на магнитных носителях. Клавиатура. Сканеры»
- 12.) Лексическая тема «Персональные компьютеры. Применение ПК»
- 13.) Лексическая тема «Модем. Типы модемов»
- 14.) Лексическая тема «Компьютерное программирование. Языки программирования»

15.) Лексическая тема «Всемирная паутина. Краткая история Интернета»

Контролируемые компетенции:

ОК 1 - 9

Критерии оценки:

Отлично - высказывание соответствует заданной теме, объем высказывания – 8 – 15 фраз, наличие разнообразных моделей , речь правильно оформлена грамматически и фонетически, языковой материал используется правильно, присутствует элемент творчества.

Хорошо - высказывание соответствует заданной теме, объем высказывания – 8 – 15 фраз, наличие разнообразных моделей , речь правильно оформлена грамматически и фонетически с наличием небольшого количества ошибок.

Удовлетворительно - высказывание соответствует заданной теме, объем высказывания – 8 – 15 фраз, наличие разнообразных моделей .

Неудовлетворительно - высказывание не соответствует заданной теме, объем высказывания менее 8 фраз, наличие грубых лексических и грамматических ошибок, затрудняющих общение понимание высказывания.

ПЕРЕВОД ПРОФЕССИОНАЛЬНО-ОРИЕНТИРОВАННОГО ТЕКСТА ПО ДИСЦИПЛИНЕ ОГСЭ.03 ИНОСТРАННЫЙ ЯЗЫК

Типовое задание: Выполните перевод профессионально ориентированного текста, пользуясь любой справочной литературой, кроме прямого перевода всего текста из интернета. (объем текста: 200 – 250 знаков, время – 60 минут)

Раздел 2. Развитие микроэлектроники

Прочтите текст (по вариантам) и озаглавьте его. Выполните письменный перевод текста по вариантам

Variant 1

It is well known that the quick development of electronics began with the invention of transistors. They replaced electronic tubes due to their numerous advantages. One of the main advantages of the transistors in comparison with the vacuum tube is absence of filament power loss. One of the principal causes of damages in electronic circuitry is high temperature. The heat causes breakdown of tubes and other circuit elements that are very sensitive to this influence. The transistor, on the other hand, does not heat its surroundings.

Another advantage of the transistor is its long life. The life of the average transistor is more than ten thousand operating hours. Because of its long lifetime and ruggedness, the transistor is very reliable and has much better efficiency in professional equipment.

Variant 2

As we know, transistors replaced electronic tubes due to their numerous advantages. One of the advantages of the transistor is its small dimensions. Because of their small size, the absence of heating and other properties, transistors make it possible to produce compact, small-dimensioned electronic devices which consume very little power.

In conclusion it is important to note that transistors revolutionized many fields of technology. They are successfully used for direct transformation of heat energy by means of thermal elements. They are also used to convert radiant energy into electricity with the help of photocells or solar batteries. Light sources and lasers are built on the basis of transistors. They find wide application in computers, automatic devices, aviation, communication, etc.

Notes _____

Filament power loss — отсутствие энергии на нити накала

Контролируемые компетенции:

ОК 1 - 9

Критерии оценки:

Отлично - перевод выполнен в полном объеме и соответствует нормам русского языка.

Хорошо - Перевод выполнен в полном объеме, есть некоторые неточности в переводе отдельных фраз, словосочетаний .

Удовлетворительно - Перевод выполнен не в полном объеме, но позволяет судить об общем содержании текста при наличии отдельных неправильно переведенных слов, фраз или словосочетаний . Русский текст перевода отредактирован.

Неудовлетворительно - Перевод текста не соответствует его содержанию, либо выполнен в объеме, не представляющим возможность понять общее содержание текста.

ГРАММАТИЧЕСКОЕ УПРАЖНЕНИЕ ПО ДИСЦИПЛИНЕ ОГСЭ.03 ИНОСТРАННЫЙ ЯЗЫК

Типовое задание: Выполните грамматическое упражнение, раскрывая скобки, вставляя необходимые по смыслу слова в нужной форме, преобразуя предложения по образцу. Время выполнения – 60 минут.

Раздел 2. Память (запоминающее устройство). Центральный процессор (ЦП)

Variant 1

Перепишите следующий текст в прошедшем времени Past Simple. Переведите предложения на русский язык.

Boris wakes up when it is already quite light. He looks at his watch. It is a quarter to seven. Quick! Boris jumps out of bed and runs to the bath-room. He has just time to take a cold shower and I drink a glass of tea with bread and butter. He is in a hurry to catch the eight o'clock train. At the railway station he meets three other boys from his group. They all have small backpacks and fishing-rods. In less than an hour they get off the train at a small station near a wood. They walk very quickly and soon find themselves on the shore of a large lake. The boys spend the whole day there fishing, boating and swimming. They return home late at night, tired but happy.

Variant 2

В следующих предложениях измените время глагола на Present Perfect. Переведите предложения на русский язык.

1. am eating my breakfast. 2. We are drinking water. 3. He is bringing them some meat and vegetables. 4. You are putting the dishes on the table. 5. They are having tea. 6. She is taking the dirty plates from the table. 7. The children are putting on their coats. 8. The pupils are writing a dictation. 9. My friend is helping me to solve a difficult problem. 10. I am learning a poem. 11. She is telling them an interesting story. 12. Kate is sweeping the floor. 13. The waiter is putting a bottle of lemonade in front of him. 14. Susan is making a new dress for her birthday party. 15. She is opening a box of chocolates.

Variant 3

Раскройте скобки, употребляя глаголы в Present Perfect или Past Simple. Переведите предложения на русский язык.

1. We (to travel) around Europe last year. 2. My father knows so much because he (to travel) a lot. 3. I (to see) Pete today. 4. She (to see) this film last Sunday. 5. Alex (to meet) his friend two hours ago. 6. I just (to meet) our teacher. 7. The children already (to decide) what to do with the books. 8. Yesterday they (to decide) to help their grandmother. 9. Helen speaks French so well because she (to live) in France. 10. She (to live) there last year. 11. The rain (to stop) and the sun is shining in the sky again. 12. The rain (to stop) half an hour ago. 13. Mary (to buy) a new hat. 14. I (to buy) a pair of gloves yesterday. 15. The wind (to blow) off the man's hat, and he cannot catch it. 16. The weather (to change), and we can go for a walk. 17. The wind (to change) in the morning.

Раздел 3. Устройства ввода-вывода. Персональные компьютеры

Variant 1

Раскройте скобки, употребляя глаголы в одном из следующих времен: *Present Continuous*, *Present Simple*, *Past Simple* или *Future Simple*.

1. Various kinds of sports (to be) popular in Russia. 2. Both children and grown-ups (to be) fond of sports. 3. What (to be) the matter with her? She (to be) so excited. – I (not to know). 4. Where you (to go)? – I (to go) to the Dynamo stadium to see the match which (to take) place there today. 5. You (to know) that very interesting match (to take) place last Sunday? 6. He (to go) to

the south a week ago. 7. When I (to be) about fifteen years old, I (to enjoy) playing football. 8. Our football team (to win) many games last year. 9. Where (to be) Boris? – He (to play) chess with his friend. 10. I (to be) sorry I (to miss) the match yesterday. But I (to know) the score. It (to be) 4 to 2 in favour of the Spartak team. 11. Nellie (to leave) for Moscow tomorrow. 12. I (to be) in a hurry. My friends (to wait) for me. 13. You (to be) at the theatre yesterday. You (to like) the opera? — Oh yes, I (to enjoy) it greatly. 14. You (to go) to London next summer?

Variant 2

Раскройте скобки, употребляя глаголы в *Past Simple* или *Past Continuous*.

1. They (to translate) a difficult text yesterday. 2. I (to open) the window at six o'clock yesterday. 3. You (to go) to the cinema yesterday? 4. I (not to see) Mike last week. 5. When I (to open) the door, my friends (to sit) around the table. 6. When you (to begin) doing your homework yesterday? 7. We (to discuss) the latest news from three till four yesterday. 8. When I (to read) the newspaper yesterday, I (to find) an interesting article on UFOs. 9. Lena (to sweep) the floor on Sunday. 10. Lena (to sweep) the floor from eleven till twelve on Sunday. 11. They (to go) to the wood last Sunday? 12. We (to work) the whole morning yesterday. 13. Mother (to cook) dinner at three o'clock yesterday. 14. She (to finish) cooking at four o'clock yesterday. 15. At half past four yesterday we (to have) dinner. 16. You (to watch) I TV yesterday? – Yes, we (to watch) TV the whole evening yesterday. 17. When you (to go) to bed yesterday? 18. I (to go) to bed at ten o'clock yesterday. 19. At half past ten yesterday I (to sleep). 20. When I (to come) home from school yesterday, my little brother (to sit) on the floor with all his toys around him. He (to play) with them. I (to tell) him to put his toys into the box as he (to make) too much noise.

Variant 3

Раскройте скобки, употребляя глаголы в *Present Perfect*, *Present Simple*, *Present Continuous*, *Past Simple* или *Past Continuous*.

1. They (to go) to the Hermitage last week. 2. They (to be) to the Hermitage twice this week. 3. After school yesterday he (to come) home, (to have) dinner, (to read) an article from the latest magazine and (to begin) doing his homework. 4. When your friend (to return) from the south? — She (to return) yesterday. — You (to go) to the station to meet her? — No, I..., I (to be) too busy. 5. With whom you (to discuss) this question yesterday? 6. I (to see) this film this week. I like it very much. 7. When I (to enter) the kitchen, I (to see) that my mother (to stand) at the table and (to cut) some cabbage. She (to cook) dinner. 8. As soon as I (to hear) a cry, I (to run) out of the room and (to see) that a child (to lie) on the ground and (to cry). "What (to happen)? Why you (to cry)? You (to hurt) yourself?" I asked. 9. As soon as I (to see) him, I (to understand) that he (to work) hard. He (to write) something and (not to notice) anything. 10. When I (to come) home yesterday, the children (to run) and (to sing) merrily. "We (to learn) a new song!" they cried. 11. When the young man (to enter) the room, she (to look) at him in surprise. "What you (to want) to tell me?" she (to say). "Why you (to come)?" 12. It (to rain) hard when I (to leave) home yesterday, so I (to return), (to put) on my raincoat and (to start) again. 13. Your brother (to return) from the north? — Yes, he (to come) a few days ago. 14. You (to be) to the Crimea? When you (to be) there? — I (to be) there in 1993. 15. Where (to be) your brother? — He just (to come) home. He (to take) a shower in the bathroom now.

Variant 4

Раскройте скобки, употребляя глаголы в одном из следующих времен: *Present*, *Past*, *Future Simple*; *Present*, *Past Continuous*; *Present*, *Past Perfect*.

It was eight o'clock in the morning and time for me to go to work. I (to look) out of the window. It (to rain) hard. "You (to get) wet through if you (to go) out now," said my mother. "No, I ...," I answered, "I (to take) an umbrella." We (to have) five umbrellas in the house, but when I (to want) to take one, I (to find) that there (to be) not one that I could use: they all (to be) torn or broken. So I (to take) them all and (to carry) them to the umbrella-maker, saying that I would call for the umbrellas on my way home in the evening. When I (to go) to have lunch in the afternoon, it still (to rain) very hard. I (to go) to the nearest cafe, and (to sit) down at a table. A few minutes later a young woman (to come) in and (to sit) down at the same table with me. When I (to finish) my lunch and (to be) ready to leave, I absent-mindedly (to take) her umbrella and (to start) for the exit. She (to stop) me saying that I (to take) her umbrella. I (to return) the umbrella with many apologies. In the evening I (to go) to the umbrella-maker, (to take) my five umbrellas and (to get) on the tram to go home. It so happened that the woman I (to meet) at the cafe (to ride) in the same tram. When she (to see) me with my five umbrellas, she (to say): "You (to have) a successful day today, (to have not) you?"

Контролируемые компетенции:

ОК 1 - 9

Критерии оценки:

Отлично	Хорошо	Удовлетворительно	Неудовлетворительно
Все задания упражнены выполнены	Выполнено 60 – 70% заданий упражнения	Выполнено 50% заданий упражнения	Выполнено менее половины заданий

ФОС ПРОМЕЖУТОЧНОЙ АТТЕСТАЦИИ В ФОРМЕ ДИФФЕРЕНЦИРОВАННОГО ЗАЧЁТА ПО ДИСЦИПЛИНЕ ОГСЭ.03 ИНОСТРАННЫЙ ЯЗЫК

Типовые задания и критерии оценки для дифференцированного зачета:

Задание 1. Расскажите в виде монологической речи основное содержание темы. Можно использовать план или вербальные опоры в виде отдельных слов (но не предложений).

Variant 1. Лексическая тема «Устройства обработки данных»

Variant 2. Лексическая тема «Информационное общество»

Variant 3. Лексическая тема «Развитие микроэлектроники»

Variant 4. Лексическая тема «История компьютеров» **Variant**

5. Лексическая тема «Принципы обработки данных»

Variant 6. Лексическая тема «Структура компьютерной системы»

Variant 7. Лексическая тема «Типы компьютеров»

Variant 8. Лексическая тема «Аппаратное обеспечение, программное обеспечение, встроенное программное обеспечение»

Variant 9. Лексическая тема «Развитие компьютеров в России»

Variant 10. Лексическая тема «Функциональные элементы цифрового компьютера»

Variant 11. Лексическая тема «Память. Устройство памяти»

Variant 12. Лексическая тема «Центральный процессор (ЦП). Основные компоненты ЦП»

Variant 13. Лексическая тема «Микропроцессор – мозг аппаратного обеспечения» **Variant**

14. Лексическая тема «Устройства ввода информации»

Variant 115. Лексическая тема «Устройства вывода. Принтеры. Типы принтеров»

Контролируемые компетенции:

ОК 1 - 9

Критерии оценки:

Отлично - высказывание соответствует заданной теме, объем высказывания – 8 – 15 фраз, наличие разнообразных моделей , речь правильно оформлена грамматически и фонетически, языковой материал используется правильно, присутствует элемент творчества.

Хорошо - высказывание соответствует заданной теме, объем высказывания – 8 – 15 фраз, наличие разнообразных моделей , речь правильно оформлена грамматически и фонетически с наличием небольшого количества ошибок.

Удовлетворительно - высказывание соответствует заданной теме, объем высказывания – 8 – 15 фраз, наличие разнообразных моделей .

Неудовлетворительно - высказывание не соответствует заданной теме, объем высказывания менее 8 фраз, наличие грубых лексических и грамматических ошибок, затрудняющих общение понимание высказывания.

Задание 2. Выполните перевод профессионально ориентированного текста, пользуясь любой справочной литературой, кроме прямого перевода всего текста из интернета.

Variant 1 What is the Internet?

The roots of the Internet lie in a collection of computer networks that were developed in the 1970s. They started with a network called the Arpanet that was sponsored by the United

States Department of Defense. The original Arpanet has long since been expanded and replaced¹, and today its descendants form the global backbone² of what we call the Internet.

The first experimental network using Internet-like technology was built in 1969. This was 56 years after the invention of the zipper³, 37 years after the introduction of the first parking meter⁴, and 13 years prior to the development of the first IBM personal computer⁵.

It would be a mistake, though, to think of the Internet as a computer network, or even a group of computer networks connected to one another: the computer networks are simply the medium that carries the information. The beauty and utility of the Internet lie in the information itself.

So, we want you to think of the Internet not as a computer network, but as a huge source of practical and enjoyable information.

The Internet resources will become as important to you as your telephone and your post office. But, overall, what is the most important for the people is that the Internet is the first global forum and the first global library. Anyone can participate at anytime: the Internet never closes. Moreover, no matter who are you, you are always welcome⁶. You will never be excluded for wearing the wrong clothes, having the wrong coloured skin, being the wrong religion, or not having enough money.

The Internet has no laws, no police, and no army. There are no real ways to hurt another person⁷, but there are many ways to be kind.

-
1. Изначальная Арпанет давно расширилась и была заменена
 2. ее потомки образуют глобальную основу
 3. застежка молния
 4. первый счетчик оплачиваемого времени стоянки автомобиля
 5. первый персональный компьютер фирмы IBM (International Business Machines)
 6. Более того, неважно, кто вы, вы всегда желанны
 7. причинить боль другому человеку

Variant 2

Unix

Unix is a family of operating systems or master control programs¹ that are used to control computers. Virtually² all types of computers can run Unix.

Conversely³, there are many variations of Unix that run all sizes of computers.

To many people the Unix culture is intimately⁴connected to the Internet. Some people consider the Internet to be part of the Unix culture.

Other people consider Unix to be part of the Internet culture. The truth of it is that the Internet very much has a life of its own. Most of the Internet computers use Unix, but the details are hidden from you.

However, you must know how to start work, enter commands, use the keyboard (and a mouse if you have one), and stop work when you are finished. It is also important to know how to manipulate data files, so you can save and retrieve information, and create and edit your own information. For example, when you send someone a message using an electronic mail, it is convenient to be able to use a text-editing program to compose the message ahead of time⁵.

You do not need to become a Unix expert in order to use the Internet, but we do recommend that you learn Unix⁶, as it is a lot more than an operating system. It is actually a large, worldwide culture⁸ that is intimately connected to the Internet.

-
1. главные управляющие программы
 2. Практически
 3. И наоборот
 4. тесно
 5. опережая время

6. но мы настоятельно рекомендуем вам изучить ЮНИКС
7. всемирная культура
2. What do the terms "subscribe" and "unsubscribe " mean?
3. What actions does the newsreader allow to perform?

Variant 3

COMPUTER LITERACY

Uninformed citizens of our information-dependent society should be computer-literate, which means that they should be able to use computers as everyday problem-solving devices. They should be aware of the potential of computers to influence the quality of life.

There was a time when only privileged people had an opportunity to learn the basics, called the three R's: reading, writing, and arithmetics. Now, as we are quickly becoming an information-becoming society, it is time to restate this right as the right to learn reading, writing and computing. There is little doubt that computers and their many applications are among the most significant technical achievements of the century. They bring with them both economic and social changes. "Computing" is a concept that embraces not only the old third R, arithmetics, but also a new idea — computer literacy?

In an information society a person who is computer-literate need not be an expert on the design of computers. He needn't even know much about how to prepare programs which are the instructions that direct the operations of computers. All of us are already on the way to becoming computer-literate. Just think of your everyday life. If you receive a subscription magazine in the post-office, it is probably addressed to you by a computer. If you buy something with a bank credit card or pay a bill by check, computers help you process the information. When you check out at the counter of your store, a computer assists the checkout clerk and the store manager. When you visit your doctor, your schedules and bills and special services, such as laboratory tests, are prepared by computer. Many actions that you have taken or observed have much in common. Each relates to some aspect of a data processing system.

Variant 4

WHAT IS A COMPUTER?

A computer is a machine with an intricate network of electronic circuits that operate switches or magnetize tiny metal cores. The switches, like the cores, are capable of being in one or two possible states, that is, on or off; magnetized or demagnetized. The machine is capable of storing and manipulating numbers, letters, and characters (symbols).

The basic idea of a computer is that we can make the machine do what we want by inputting signals that turn certain switches on and turn others off, or magnetize or do not magnetize the cores.

The basic job of computers is processing of information. For this reason computers can be defined as devices which accept information in the form of instructions, called a program, and characters, called data, perform mathematical and / or logical operations on the information, and then supply results of these operations. The program, or part of it, which tells the computers what to do and the data, which provide the information needed to solve the problem, are kept inside the computer in a place called memory.

It is considered that computers have many remarkable powers. However most computers, whether large or small, have three basic capabilities.

First, computers have circuits for performing arithmetic operations, such as: addition, subtraction, division, multiplication and exponentiation.

Second, computers have a means of communicating with the user. After all, if we couldn't feed information in and get results back, these machines wouldn't be of much use. Some of the most common methods of inputting information are to use terminals, diskettes, disks and magnetic tapes. The computer's input device (a disk drive or tape drive) reads the information into the computer. For outputting information two common devices are used: a printer, printing

the new information on paper, and a cathode-ray-tube display, which shows the results on a TV-like screen.

Third, computers have circuits which can make decisions. The kinds of decisions which computer circuits can make are not of the type: "Who would win the war between two countries?" or "Who is the richest person in the world?" Unfortunately, the computer can only decide three things, namely: Is one number less than another? Are two numbers equal? and, Is one number greater than another?

A computer can solve a series of problems and make thousands of logical decisions without becoming tired. It can find the solution to a problem in a fraction of the time it takes a human being to do the job.

A computer can replace people in dull, routine tasks, but it works according to the instructions given to it. There are times when a computer seems to operate like a mechanical 'brain', but its achievements are limited by the minds of human beings. A computer cannot do anything unless a person tells it what to do and gives it the necessary information; but because electric pulses can move at the speed of light, a computer can carry out great numbers of arithmetic-logical operations almost instantaneously. A person can do the same, but in many cases that person would be dead long before the job was finished.

Variant 5

MICROELECTRONICS AND MICROMINIATURIZATION

The intensive effort of electronics to increase the reliability and performance of its products, while reducing their size and cost, led to the results that hardly anyone could predict. The evolution of electronic technology is sometimes called a revolution: a quantitative change in technology gave rise to qualitative change in human capabilities. There appeared a new branch of science — microelectronics.

Microelectronics embraces electronics connected with the realization of electronic circuits, systems and subsystems from very small electronic devices. Microelectronics is a name for extremely small electronic components and circuit assemblies, made by film or semiconductor techniques. A microelectronic technology reduced transistors and other circuit elements to dimensions almost invisible to unaided eye. The point of this extraordinary miniaturization is to make circuits long-lasting, low in cost, and capable of performing electronic functions at extremely high speed. It is known that the speed of response depends on the size of transistor: the smaller the transistor, the faster it is. The smaller the computer, the faster it can work.

One more advantage of microelectronics is that smaller devices consume less power. In space satellites and spaceships this is a very important factor.

Another benefit resulting from microelectronics is the reduction of distances between circuit components. Packing density increased with the appearance of small-scale integrated circuit, medium-scale IC, large-scale IC and very-large-scale IC. The change in scale was measured by the number of transistors on a chip. There appeared a new type of integrated circuits, microwave integrated circuit. The evolution of microwave IC began with the development of planar transmission lines. Then new IC components in a fine line transmission line appeared. Other more exotic techniques, such as dielectric waveguide integrated circuits emerged.

Microelectronic technique is continuing to displace other modes. Circuit patterns are being formed with radiation having wavelength shorter than those of light.

Electronics has extended man's intellectual power. Microelectronics extends that power still further.

Variant 6

THE FIRST COMPUTERS

In 1930 the first analog computer was built by American named Vannevar Bush. This device was used in World War II to help aim guns.

Many technical developments of electronic digital computers took place in the 1940s and 1950s. Mark I, the name given to the first digital computer, was completed in 1944. The man responsible for this invention was Professor Howard Aiken. This was the first machine that could figure out long lists of mathematical problems at a very fast rate.

In 1946 two engineers at the University of Pennsylvania, J.Eckert and J.Maushly, built their digital computer with vacuum tubes. They named their new invention ENIAC (the Electronic Numerical Integrator and Calculator).

Another important achievement in developing computers came in 1947, when John von Neumann developed the idea of keeping instructions for the computer inside the computer's memory. The contribution of John von Neumann was particularly significant. As contrasted with Babbage's analytical engine, which was designed to store only data, von Neumann's machine, called the Electronic Discrete Variable Computer, or ED-VAC, was able to store both data and instructions. He also contributed to the idea of storing data and instructions in a binary code that uses only ones and zeros. This simplified computer design. Thus computers use two conditions, high voltage, and low voltage, to translate the symbols by which we communicate into unique combinations of electrical pulses. We refer to these combinations as codes.

Neumann's stored program computer as well as other machines of that time were made possible by the invention of the vacuum tube that could control and amplify electronic signals. Early computers, using vacuum tubes, could perform computations in thousandths of seconds, called milliseconds, instead of seconds required by mechanical devices.

Variant 7

ADVANTAGES OF COMPUTER DATA PROCESSING

Computer-oriented data processing systems or just computer data processing systems are not designed to imitate manual systems. They should combine the capabilities of both humans and computers. Computer data processing systems can be designed to take advantage of four capabilities of computers.

1. Accuracy. Once data have been entered correctly into the computer component of a data processing system, the need for further manipulation by humans is eliminated, and the possibility of error is reduced. Computers, when properly programmed, are also unlikely to make computational errors. Of course, computer systems remain vulnerable to the entry by humans of invalid data.

2. Ease of communications. Data, once entered, can be transmitted wherever needed by communications networks. These may be either earth or satellite-based systems. A travel reservations system is an example of a data communications network. Reservation clerks throughout the world may make an enquiry about transportation or lodgings and receive an almost instant response. Another example is an office communications system that provides executives with access to a reservoir of data, called a corporate data base, from their personal microcomputer work stations.

3. Capacity of storage. Computers are able to store vast amounts of information, to organize it, and to retrieve it in ways that are far beyond the capabilities of humans. The amount of data that can be stored on devices such as magnetic discs is constantly increasing. All the while, the cost per character of data stored is decreasing.

4. Speed. The speed, at which computer data processing systems can respond, adds to their value. For example, the travel reservations system mentioned above would not be useful if clients had to wait more than a few seconds for a response. The response required might be a fraction of a second.

Thus, an important objective in the design of computer data processing systems is to allow computers to do what they do best and to free humans from routine, error-prone tasks. The most cost-effective computer data processing system is the one that does the job effectively and

at the least cost. By using computers in a cost-effective manner, we will be better able to respond to the challenges and opportunities of our post-industrial, information-dependent society.

Variant 8

COMPUTER SYSTEM ARCHITECTURE

As we know all computer systems perform the functions of inputting, storing, processing, controlling, and outputting. Now we'll get acquainted with the computer system units that perform these functions. But to begin with let's examine computer systems from the perspective of the system designer, or architect.

It should be noted that computers and their accessory equipment are designed by a computer system architect, who usually has a strong engineering background. As contrasted with the analyst, who uses a computer to solve specific problems, the computer system architect usually designs computer that can be used for many different applications in many different business. For example, the product lines of major computer manufacturers such as IBM, Digital Equipment Corporation and many others are the result of the efforts of teams of computer system architects.

Unless you are studying engineering, you don't need to become a computer system architect. However, it is important that as a potential user, applications programmer or systems analyst you understand the functions of the major units of a computer system and how they work together.

Types of computers

The two basic types of computers are analog and digital. Analog computers simulate physical systems. They operate on the basis of an analogy to the process that is being studied. For example, a voltage may be used to represent other physical quantities such as speed, temperature, or pressure. The response of an analog computer is based upon the measurement of signals that vary continuously with time. Hence, analog computers are used in applications that require continuous measurement and control.

Digital computers, as contrasted with analog computers, deal with discrete rather than continuous quantities. They count rather than measure. They use numbers instead of analogous physical quantities to simulate on-going, or real-time processes. Because they are discrete events, commercial transactions are in a natural form for digital computation. This is one reason that digital computers are so widely used in business data processing.

Machines that combine both analog and digital capabilities are called hybrid computers. Many business, scientific, and industrial computer applications rely on the combination of analog and digital devices. The use of combination analog devices will continue to increase with the growth in applications of microprocessors and microcomputers. An example of this growth is the trend toward installing control systems in household appliances such as microwave ovens and sewing machines. In the future we will have complete indoor climate control systems and robots to do our housecleaning. Analog sensors will provide inputs to the control centres of these systems, which will be small digital computers.

Variant 9

HARDWARE, SOFTWARE, AND FIRMWARE

The units that are visible in any computer are the physical components of a data processing system, or hardware. Thus, the input, storage, processing and control devices are hardware. Not visible is the software — the set of computer programs, procedures, and associated documentation that make possible the effective operation of the computer system. Software programs are of two types: systems software and applications software.

Systems software are the programs designed to control the operation of a computer system. They do not solve specific problems. They are written to assist people in the use of the

computer system by performing tasks, such as controlling all of the operations required, to move data into and out of a computer and all of the steps in executing an application program. The person who prepares systems software is referred to as a systems programmer. Systems programmers are highly trained specialists and important members of the architectural team.

Applications software are the programs written to solve specific problems (applications), such as payroll, inventory control, and investment analysis. The word program usually refers to an application program, and the word programmer is usually a person, who prepares applications software.

Often programs, particularly systems software, are stored in an area of memory not used for applications software. These protected programs are stored in an area of memory called read-only memory (ROM), which can be read from but not written on.

Firmware is a term that is commonly used to describe certain programs that are stored in ROM. Firmware often refers to a sequence of instructions (software) that is substituted for hardware. For example, in an instance where cost is more important than performance, the computer system architect might decide not to use special electronic circuits (hardware) to multiply two numbers, but instead write instructions (software) to cause the machine to accomplish the same function by repeated use of circuits already designed to perform addition.

Variant 10

FROM THE HISTORY OF COMPUTER DEVELOPMENT IN RUSSIA

As it is well known, Russian scientists made great contribution into the development of computers. Russian mathematician P. Chebyshev who lived in the 19th century was interested in calculators. Among many other mechanisms invented by him there was an arithmometer designed in 1876. It was one of the most unique calculating machines of the time. At the beginning of the 20th century Academic A.Krylov constructed a mechanical integrator for solving differential equations.

The first Soviet computer, a small-size computing machine (MESM) was tested in 1950 under Academician S.Lebedev. Next year it was put into operation. In a year MESM was followed by BESM, a large-size electronic computing machine, with 8000 operations per second.

Serial production of computers in the USSR has been started since 1953. That year U.Basilevsky headed the design and manufacture of computer STRELA. 1958 witnessed the production of M-20, computers of the first generation under the guidance of S.Lebedev. The first generation of electron tube computers was followed by the second generation of foto transistor computers, using magnetic logic elements.

Starting with 1964 semiconductor computers — URAL, BESM-4 and M-220 were produced. Under Academician Glushkov small-size computers MIR, MIR-2 and DNEPR were designed and tested at the Institute of Cybernetics.

In the late 60s together with other members of the Council of Mutual Economic Assistance the Soviet Union started on the program of Unified Computer System, the program concerned with the third generation of computers with high-speed performance and program compatibility (совместимость).

Variant 11 STORAGE DEVICES

Storage media are classified as primary storage or secondary storage on the basis of combinations of cost, capacity, and access time. The cost of storage devices is expressed as the cost per bit of data stored. The time required for the computer to locate and transfer data to and from a storage medium is called the access time for that medium. Capacities range from a few hundred bytes of primary storage for very small computers to many billions of bytes of archival storage for very large computer systems.

Memories may be classified as electronic or electromechanical. Electronic memories have no moving mechanical parts, and data can be transferred into and out of them at very high speeds. Electromechanical memories depend upon moving mechanical parts for their operation, such as mechanisms for rotating magnetic tapes and disks. Their data access time is longer than is that of electronic memories; however they cost less per bit stored and have larger capacities for data storage. For these reasons most computer systems use electronic memory for primary storage and electromechanical memory for secondary storage.

Primary storage has the least capacity and is the most expensive; however, it has the fastest access time. The principal primary storage circuit elements are solid-state devices: magnetic cores and semiconductors. For many years magnetic cores were the principal elements used in digital computers for primary storage. The two principal types of semiconductors used for memory are bipolar and metal-oxide semiconductors (MOS). The former is faster, the latter is more commonly used at present. Because data can be accessed randomly, semiconductor memories are referred to as random-access memory, or RAM. There is a wide range of secondary storage devices. Typical hardware devices are rotating electromechanical devices. Magnetic tapes, disks, and drums are the secondary storage hardware most often used in computer systems for sequential processing. Magnetic tape, which was invented by the Germans during World War II for sound recording, is the oldest secondary storage medium in common use. Data are recorded in the form of small magnetized "dots" that can be arranged to represent coded T patterns of bits.

Tape devices range from large-capacity, high-data-rate units used with large data processing systems to cassettes and cartridges used with small systems. Magnetic disk storage, introduced in the early 1960s, has replaced magnetic tape as the main method of secondary storage. As contrasted with magnetic tapes, magnetic discs can perform both sequential and random processing. They are classified as moving-head, fixed-head, or combination moving-head and fixed-head devices. Magnetic discs are the predominant secondary storage media. They include flexible, or floppy discs, called diskettes. The "floppies" were introduced by IBM in 1972 and are still a popular storage medium to meet the demands of the microcomputer market.

Variant 12

INPUT DEVICES

There are several devices used for inputting information into the computer: a keyboard, some coordinate input devices, such as manipulators (a mouse, a track ball), touch panels and graphical plotting tables, scanners, digital cameras, TV tuners, sound cards etc.

When personal computers first became popular, the most common device used to transfer information from the user to the computer was the keyboard. It enables inputting numerical and text data. A standard keyboard has 104 keys and three more ones informing about the operating mode of light indicators in the upper right corner.

Later when the more advanced graphics became to develop, user found that a keyboard did not provide the design capabilities of graphics and text representation on the display. There appeared manipulators, a mouse and a track ball, that are usually used while operating with graphical interface. Each software program uses these buttons differently.

The mouse is an optic-mechanical input device. The mouse has three or two buttons which control the cursor movement across the screen. The mouse provides the cursor control thus simplifying user's orientation on the display. The mouse's primary functions are to help the user draw, point and select images on his computer display by moving the mouse across the screen.

In general software programs require to press one or more buttons, sometimes keeping them depressed or double-click them to issue changes in commands and to draw or to erase images. When you move the mouse across a flat surface, the ball located on the bottom side of the mouse turns two rollers. One is tracking the mouse's vertical movements, the other is

tracking horizontal movements. The rotating ball glides easily, giving the user good control over the textual and graphical images.

In portable computers touch panels or touch pads are used instead of manipulators. Moving a finger along the surface of the touch pad is transformed into the cursor movement across the screen.

Graphical plotting tables (plotters) find application in drawing and inputting manuscript texts. You can draw, add notes and signs to electronic documents by means of a special pen. The quality of graphical plotting tables is characterized by permitting capacity, that is the number of lines per inch, and their capability to respond to the force of pen pressing .

Scanner is used for optical inputting of images (photographies, pictures, slides) and texts and converting them into the computer form.

Digital video cameras have been spread recently. They enable getting video images and photographs directly in digital computer format. Digital cameras give possibility to get high quality photos.

Sound cards produce sound conversion from analog to digital form. They are able to synthesize sounds. Special game-ports and joysticks are widely used in computer games.

Variant 13

The World Wide Web [WWW]

The WWW or Web is a project whose goal is to offer a simple, consistent interface to the vast resources of the Internet.

When you use the Web, you follow your nose: i.e., you start anywhere you want, and you jump from one place to another pursuing whatever strikes your fancy. With only a few simple commands, you can jump way around the Internet like a hyperactive flea at a dog convention¹.

To understand the Web we need to start with the idea of hypertext and XML. Hypertext is data that contain links to other data. XML (extensible Markup Language) was accepted as a standard by the WWW Consortium in 1996. This was because of its promise to improve the Web experience by replacing HTML with XML, making it possible to improve it and redefine the way in which documents and data were exchanged. A simple example of hypertext is an encyclopedia, the entry on "Trees". At the end of the article you see a reference saying, "For related information see Plants". This last line is a link from the "Trees" article to the "Plants" article.

The Web is based on hypertext that is a lot more complex. There may be links anywhere within a document, not just at the end. A hypertext document, in the language of the Web, is something that contains data and links to other documents. The program that you use to read a hypertext document is called a browser. As you follow one link to another, it means that you are navigating the Web².

The word 'hypermedia' is referring to documents that contain a variety of data types and not just plain text. So, the Web does contain some hypermedia³, but most of what you see will be plain vanilla hypertext⁴: textual material that you can display on your screen.

The job of your browser is to act as a window into the Internet by following links you desire⁵, and by accessing each document using an appropriate method.

So, the Web does allow you to access all kinds of Internet resources, just by using a browser to "read" the appropriate document. The Web also uses a client/server system.

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1. Подобно гиперактивной блохе в собачьей стае
 2. Это означает, что вы перемещаетесь во Всемирной паутине
 3. Таким образом, Всемирная паутина все содержит некую гиперсреду
 4. Будет самым обыкновенным гипертекстом
 5. В качестве окна в интернет, в котором вы будете двигаться, следуя ссылкам, которые вам нужны

Variant 14

OUTPUT DEVICES. PRINTERS

Printers provide information in a permanent, human-readable form. They are the most commonly used output devices and are components of almost all computer systems. Printers vary greatly in performance and design. We will classify printers as character printers, line printers and page printers in order to identify three different approaches to printing, each with a different speed range. In addition, printers can be described as either impact or nonimpact. Printers that use electromechanical mechanisms that cause hammers to strike against a ribbon and the paper are called impact printers. Nonimpact printers do not hit or impact a ribbon to print.

Character printers print only one character at a time. A typewriter is an example of a character printer. Character printers are the type used with literally all microcomputers as well as on computers of all sizes whenever the printing requirements are not large. Character printers may be of several types. A letter-quality printer is a character printer which produces output of typewriter quality. Letter-quality printers typically have speeds ranging from 10 to 50 characters per second. Dot-matrix printers form each character as a pattern of dots. These printers have a lower quality of type but are generally faster printers than the letter-quality printers — in the range of 50 to 200 characters per , second. One of the newest types of character printer is the ink-jet printer. It sprays small drops of ink onto paper to form printed characters. The ink has a high iron content, which is affected by magnetic fields of the printer. These magnetic fields cause the ink to take the shape of a character as the ink approaches the paper.

Line printers are electromechanical machines used for high-volume paper output on most computer systems. Their printing speeds are such that to an observer they appear to be printing a line at a time. They are impact printers. The speeds of line printers vary from 100 to 2500 lines per minute. Line printers have been designed to use many different types of printing mechanisms. Two of the most common print mechanisms are the drum and the chain. Drum printers use a solid, cylindrical drum, rotating at a rapid speed. Speeds of drum printers vary from 200 to over 2000 lines per minute. Chain printers have their character set on a rapidly rotating chain called a print chain. Speeds of chain printers range from 400 to 2400 lines per minute.

Page printers are high-speed nonimpact printers. Their printing rates are so high that output appears to emerge from the printer a page at a time. A variety of techniques are used in the design of page printers. These techniques, called electrophotographic techniques, have developed from the paper copier technology. Laser-beam printers use a combination of laser beam and electrophotographic techniques to create printer output at a rate equal to 18000 lines per minute.

Variant 15

PERSONAL COMPUTERS

Personal computers are supposed to appear in the late 1970s. One of the first and most popular personal computers was the Apple II, introduced in 1977 by Apple Computer. During the late 1970s and early 1980s, new models and competitive operating systems seemed to appear daily. Then, in 1981, IBM entered the fray with its first personal computer, known as the IBM PC. The IBM PC quickly became the personal computer of choice, and most other personal computer manufacturers fell by the way-side. One of the few companies to survive IBM's onslaught was Apple Computer, which is sure to remain a major player in the personal computer marketplace. In less than a decade the microcomputer has been transformed from a calculator and hobbyist's toy into a personal computer for almost everyone.

What is a personal computer? How can this device be characterized?

— First, a personal computer being microprocessor-based, its central processing unit, called a microprocessor unit, or MPU, is concentrated on a single silicon chip.

— Second, a PC has a memory and word size that are smaller than those of minicomputers and large computers. Typical word sizes are 8 or 16 bits, and main memories range in size from 16 K to 512 K.

— Third, a personal computer uses smaller, less expensive, and less powerful input, output and storage components than do large computer systems. Most often, input is by means of a keyboard, soft-copy output being displayed on a cathode-ray tube screen. Hard-copy output is produced on a low-speed character printer.

— A PC employs floppy disks as the principal online and offline storage devices and also as input and output media.

— Finally, a PC is a general-purpose, stand-alone system that can begin to work when plugged in and be moved from place to place.

Probably the most distinguishing feature of a personal computer is that it is used by an individual, usually in an interactive mode. Regardless of the purpose for which it is used, either for leisure activities in the home or for business applications in the office, we can consider it to be a personal computer.

Контролируемые компетенции:

ОК 1 - 9

Критерии оценки:

Отлично – перевод выполнен в полном объеме и соответствует нормам русского языка.

Хорошо – Перевод выполнен в полном объеме, есть некоторые неточности в переводе отдельных фраз, словосочетаний .

Удовлетворительно – Перевод выполнен не в полном объеме, но позволяет судить об общем содержании текста при наличии отдельных неправильно переведенных слов, фраз или словосочетаний . Русский текст перевода отредактирован.

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