МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ
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высшего образования
МОСКОВСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ГЕОДЕЗИИ И КАРТОГРАФИИ
(МИИГАиК)

Факультет геоинформатики и информационной безопасности
Кафедра лингвистики

ДОКУМЕНТ ПОДПИСАН
ЭЛЕКТРОННОЙ ПОДПИСЬЮ

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Действителен: с 21.07.2025 по 14.10.2026

«УТВЕРЖДАЮ»
Проректор
А. Л. Степанченко
16 февраля 2024 г.

РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ (МОДУЛЯ) «Б1.О.03 ИНОСТРАННЫЙ ЯЗЫК»

Уровень высшего образования: бакалавриат

Направление подготовки: 09.03.02 Информационные системы и технологии

Направленность(профиль) подготовки: Информационные системы и технологии

Квалификация (степень) выпускника: бакалавр

Форма обучения: очная

Год набора (приема на обучение): 2024

Срок получения образования: 4 года

Объем: в зачетных единицах: 15 з.е.
в академических часах: 540 ак.ч.

Москва, 2024

Разработчики:

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Рабочая программа дисциплины (модуля) составлена в соответствии с требованиями ФГОС ВО по направлению подготовки 09.03.02 Информационные системы и технологии, утвержденного приказом Минобрнауки от 19.09.2017 № 926

Согласование и утверждение

№	Подразделение	Ответственное лицо	ФИО	Виза	Дата, протокол (при наличии)
1	факультет Геоинформатики и информационной безопасности	Председатель ученого совета факультета	Матерухин А. В.	Рассмотрено	14.12.2023, № 7-23

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1. Цель и задачи освоения дисциплины (модуля)

Цель освоения дисциплины - заключается в получении обучающимися теоретических знаний о функционировании языка и его возможностях в рамках новой парадигмы коммуникации – с целью добычи и поиска новых знаний. Основная цель преподавания языка для неязыковых направлений формулируется как «повышение исходного уровня владения иностранным языком, достигнутого на предыдущей ступени образования, и овладение студентами необходимым и достаточным уровнем коммуникативной компетенции для решения социально-коммуникативных задач в различных областях бытовой, культурной, профессиональной и научной деятельности при общении с зарубежными партнерами, а также для дальнейшего самообразования».

Задачи изучения дисциплины:

- формирование четкого представления о требованиях, вытекающих из нового социального заказа на специалиста инновационного типа – такого профессионала, который способен эффективно применять коммуникативные умения при общении на неродном языке, для нахождения и использования информации на другом языке, а также для обеспечения процесса непрерывного самообразования;
- освоение навыков самообучения, рациональных способов изучения материала, собственного целеполагания и планирования, осознание своих качеств как обучающегося и как индивидуальности, умение находить пробелы и сильные стороны в знаниях, в идеале – формирование своего собственного образовательного стиля (включающего самоанализ, самоконтроль, самореализацию). В целом, это также относится и к повышение общей культуры студента;
- формирование умений применять иноязычную коммуникативную компетенцию в изучении основных сфер речевой деятельности при изучении иностранных языков (говорения, чтения, аудирования и письма);
- формирование четкого представления о требованиях, вытекающих из квалификационной характеристики специалиста, которым обучающийся собирается стать, то есть с учетом конкретных потребностей конкретных дисциплин, специальностей и направлений.

2. Планируемые результаты обучения по дисциплине (модулю), соотнесенные с планируемыми результатами освоения образовательной программы

Компетенции, индикаторы и результаты обучения

УК-4 Способен осуществлять деловую коммуникацию в устной и письменной формах на государственном языке Российской Федерации и иностранном(ых) языке(ах)

УК-4.1 Выбирает стиль общения на государственном языке РФ и иностранном языке в зависимости от цели и условий партнерства; адаптирует речь, стиль общения и язык жестов к ситуациям взаимодействия

Знать:

УК-4.1/Зн1 коммуникативные технологии, в том числе на иностранном(ых) языке(ах), для академического и профессионального взаимодействия

УК-4.1/Зн2 Лексический минимум в объеме 2000 учебных лексических единиц общего и терминологического характера, необходимого для возможности получения информации профессионального содержания из зарубежных источников

Уметь:

УК-4.1/Ум1 Устанавливать и развивать профессиональные контакты в соответствии с потребностями совместной деятельности

УК-4.1/Ум2 Выполнять переводы технических текстов с иностранного языка

Владеть:

УК-4.1/Нв1 Техниками установления профессиональных контактов, в том числе на иностранных языках

УК-4.1/Нв2 Навыками чтения, аудирования, разговорной речи, письмо в профессиональной области

УК-4.2 Выполняет перевод профессиональных текстов с иностранного языка на государственный язык РФ и с государственного языка РФ на иностранный

Знать:

УК-4.2/Зн1 Методы, способы и приемы перевода академических текстов с иностранного языка на русский язык и с русского языка на иностранный язык

УК-4.2/Зн2 Основные способы работы на языковым и речевым материалом

Уметь:

УК-4.2/Ум1 Редактировать, а также выполнять письменные и устные переводы академических текстов с иностранного языка на русский язык и с русского языка на иностранный язык

УК-4.2/Ум2 Выполнять перевод технических текстов с иностранного языка

Владеть:

УК-4.2/Нв1 Методами, способами и приемами перевода академических текстов с иностранного языка на русский язык и с русского языка на иностранный язык

УК-4.2/Нв2 Приемами самостоятельной работы с языковым материалом с использованием справочной и учебной литературы

УК-4.3 Ведет деловую коммуникацию в письменной и электронной форме, учитывая особенности стилистики официальных и неофициальных писем, социокультурные различия в формате корреспонденции на государственном и иностранном (-ых) языках

Знать:

УК-4.3/Зн1 Правила и приемы представления результатов академической и профессиональной деятельности на различных публичных мероприятиях

УК-4.3/Зн2 нормы произношения, лексику иностранного языка общеупотребутельного, терминологического и профессионального содержания; типовые способы построения высказываний в устной и письменной речи

Уметь:

УК-4.3/Ум1 Представлять результаты академической и профессиональной деятельности на различных публичных мероприятиях, включая международные

УК-4.3/Ум2 осуществляет коммуникацию с зарубежными партнерами; переводит научно-техническую литературу, связанную с профессиональной деятельностью

Владеть:

УК-4.3/Нв1 Техниками и приемами для представления результатов академической и профессиональной деятельности на различных публичных мероприятиях.

УК-4.3/Нв2 стратегиями проведения сопоставительного анализа факторов культуры различных стран

УК-4.4 Представляет свою точку зрения при деловом общении и в публичных выступлениях

Знать:

УК-4.4/Зн1 Приемы и техники осуществления академического и профессионального дискурса на государственном языке РФ и иностранном языке

УК-4.4/Зн2 лексический минимум в объеме 2000 лексических единиц общего и терминологического характера, необходимого для возможности получения информации профессиональго содержания из зарубежных источников

Уметь:

УК-4.4/Ум1 Отстаивать свои позиции и идеи в академических и профессиональных дискуссиях на государственном языке РФ и иностранном языке

УК-4.4/Ум2 осуществлять коммуникацию с зарубежными партнерами; переводить научно-техническую литературу по вопросами, связанным с профессиональной деятельностью

Владеть:

УК-4.4/Нв1 Техниками представления своей позиции и идеи в академических и профессиональных дискуссиях на государственном языке РФ и иностранном языке

УК-4.4/Нв2 компенсаторными умениями, помогающими преодолеть "сбои" в коммуникации, вызванные объективными и субъективными, социокультурными причинами

3. Место дисциплины в структуре ОП

Дисциплина (модуль) Б1.О.03 «Иностранный язык» относится к обязательной части образовательной программы и изучается в семестре(ах): 1, 2, 3, 4.

В процессе изучения дисциплины студент готовится к решению типов задач профессиональной деятельности, предусмотренных ФГОС ВО и образовательной программой.

4. Объем дисциплины (модуля) и виды учебной работы

Период обучения	Общая трудоемкость (часы)	Общая трудоемкость (ЗЕТ)	Практические занятия (часы)	Самостоятельная работа (часы)	Промежуточная аттестация (часы)
1 семестр	72	2	68	4	Зачет
2 семестр	144	4	76	68	Зачет
3 семестр	144	4	68	76	Зачет
4 семестр	180	5	68	76	Экзамен (36)
Всего	540	15	280	224	36

5. Содержание дисциплины (модуля)

5.1. Разделы, темы дисциплины и виды занятий

(часы промежуточной аттестации не указываются)

Наименование раздела, темы		кие занятия	льная работа	ые результаты соотнесенные с ми освоения

	Всего	Практичес	Самостоятє	Планируем обучения, с результатам программы
Раздел 1. Вводно-коррективный курс	**36**	**34**	**2**	УК-4.1
Тема 1.1. Моя биография, семья	36	34	2	
Раздел 2. Общий курс иностранного языка	**180**	**110**	**70**	УК-4.1 УК-4.2
Тема 2.1. Современная система образования в России, мой институт	36	34	2	
Тема 2.2. Проблемы экологии в современном мире.	34	18	16	
Тема 2.3. Страны изучаемого языка	38	20	18	
Тема 2.4. .Система высшего образования в США и Великобритании	34	18	16	
Тема 2.5. Россия в современном мире, Москва, мой родной город.	38	20	18	
Раздел 3. Профессионально-ориентированный иностранный язык	**288**	**136**	**152**	УК-4.1 УК-4.2 УК-4.3 УК-4.4
Тема 3.1. Моя специальность: Современное состояние изучаемой науки, технологии.	144	68	76	
Тема 3.2. Моя специальность: История изучаемой науки и видные ученые	144	68	76	
Итого	**504**	**280**	**224**	

5.2. Содержание разделов, тем дисциплин и формы текущего контроля

Раздел 1. Вводно-коррективный курс

Тема 1.1. Моя биография, семья

Формирование коммуникативных компетенций по теме «Моя биография, семья».
Развитие у студентов учебно-познавательных и компенсаторных компетенций в рамках работы со словарями, учебными материалами, аудио и видео компонентами.
Развитие у студентов продуктивных навыков письма в формате изложения элементарной личной информации о себе, родственниках, друзьях и знакомых.
Развитие продуктивных навыков письма в формате написания коротких личных электронных писем и представления личной информации.
Грамматика: Личные и притяжательные местоимения. Способы образования множественного числа имен существительных, общий и притяжательный падежи. Степени сравнения прилагательных и наречий. Определенный и неопределенный артикль. Глагол to be. Времена группы Indefinite (Simple). Неправильные глаголы.

Раздел 2. Общий курс иностранного языка

Тема 2.1. Современная система образования в России, мой институт

Формирование у студентов гуманитарной личностной позиции и миропонимания.
Развитие навыков ознакомительного и изучающего чтения по теме «Современная система образования в России». Чтение и перевод текстов.
Грамматика: Числительные. Вспомогательные глаголы, глаголы-связки. Времена группы Continuous (Progressive). Времена группы Perfect

Тема 2.2. Проблемы экологии в современном мире.

Развитие навыков аудирования с пониманием основного содержания и выборочным извлечением информации на базе материалов «Проблемы экологии в современном мире.».
Развитие навыков изучающего чтения и монологической речи на базе тематически ориентированных материалов «Загрязнение окружающей среды, сохранение природных ресурсов, борьба с различными видами загрязнений, бережное отношение к природе».
Грамматика: Времена группы Perfect Continuous (Progressive). Фразовые глаголы. Типы предложений. Образование вопросительных и отрицательных предложений

Тема 2.3. Страны изучаемого языка

Развитие навыков изучающего чтения и монологической речи (презентация) на базе тематически ориентированных материалов по теме «Страны изучаемого языка» (США, Великобритания: географическое положение, страноведческая характеристика)
Грамматика: Страдательный залог: образование и употребление. Особенности перевода страдательных оборотов на русский язык. Способы выражения будущего времени (going to)

Тема 2.4. .Система высшего образования в США и Великобритании

Формирование прагматических умений, включающих способность и готовность ориентироваться в незнакомой стране, устанавливать речевой контакт при путешествии, соблюдать социальные нормы и речевой этикет носителей языка.
Развитие навыков изучающего чтения и монологической речи (презентация) на базе тематически ориентированных материалов «Система высшего образования в США и Великобритании» (Система высшего образования. старейшие университеты США и Великобритании)
Грамматика: Модальные глаголы

Тема 2.5. Россия в современном мире, Москва, мой родной город.

Формирование системных и аналитических компетенций в рамках проведения комплексного анализа на базе изучения материала по теме «Россия в современном мире». (Географическое положение России, Москва – столица России, ее историческая значимость, мой родной город, его история, достопримечательности).
Грамматика: Прямая и косвенная речь, согласование времен. Будущее в прошедшем

Раздел 3. Профессионально-ориентированный иностранный язык

Тема 3.1. Моя специальность: Современное состояние изучаемой науки, технологии.

ормирование коммуникативных и аналитических компетенций на базе освоения текстов по теме «История изучаемой науки и видные ученые».
Развитие у студентов профессионального мышления, умения анализировать и проектировать свое поведение и деятельность на практике через развитие навыков устной речи по профессионально ориентированной тематике «Развитие изучаемой отрасли науки, вклад ученых разных стран и России в ее развитие, основные достижения, наиболее значимые теории, применяемые в соответствующей отрасли науки».
Грамматика: Неличные формы глагола: инфинитив. Причастие, герундий. Причастие I и II (способы образования, функции в предложении). Независимый причастный оборот. Образование форм герундия, его свойства и функции в предложении, перевод.

Тема 3.2. Моя специальность: История изучаемой науки и видные ученые

Формирование коммуникативных компетенций по теме «Современное состояние изучаемой науки, технологии».
Формирование навыков монологической речи по теме «Основные проблемы науки, различные технологии, применяемые в отрасли, их изменение и влияние на развитие отрасли и соответствующего направления в науке, эксперимент как проверка теории».
Развитие у студентов учебно-познавательных и компенсаторных компетенций в рамках работы со словарями, учебными материалами, аудио и видео компонентами; развития умений и навыков самостоятельного применения полученных знаний в поиске нужного материала, перевод индивидуальных текстов, подготовка рефератов, докладов и презентаций по заданной тематике.
Грамматика: усилительная конструкция it is … that, употребление used to и would для выражения повторяющихся действий в прошлом. Стилистические особенности речи. Аббревиатуры. Основные лексические различия британского и американского вариантов английского языка

Текущий контроль

Вид (форма) контроля
Реферат

6. Порядок проведения промежуточной аттестации

Порядок проведения промежуточной аттестации регламентируется локальными нормативными актами Университета:
- Положением о формах, периодичности, порядке текущего контроля успеваемости и промежуточной аттестации обучающихся по основным образовательным программам высшего образования – программам бакалавриата, программам специалитета, программам магистратуры в федеральном государственном бюджетном образовательном учреждении высшего образования «Московский государственный университет геодезии и картографии», п.6 «Организация и проведение промежуточной аттестации».
- Положением о порядке осуществления образовательного процесса, проведения текущего контроля успеваемости и промежуточной аттестации обучающихся с применением электронного обучения и дистанционных образовательных технологий в федеральном государственном бюджетном образовательном учреждении высшего образования «Московский государственный университет геодезии и картографии», п.8 «Проведение промежуточной аттестации с применением ЭО и ДОТ».

Промежуточная аттестация: Зачет, 1 семестр.

При проведении промежуточной аттестации применяется среднее арифметическое значение оценок, полученных за каждый элемент оценивания, указанный в билете (ответ на устный

вопрос; просмотр текста и ответ на вопрос по нему; полный письменный перевод текста). Итоговая оценка по дисциплине рассчитывается как отношение суммы оценок к количеству полученных оценок (три). При проведении оценивания по вопросам и заданиям, указанным в билете, в ходе промежуточной аттестации преподаватель может учитывать результаты текущего контроля.

Промежуточная аттестация: Зачет, 2 семестр.

При проведении промежуточной аттестации применяется среднее арифметическое значение оценок, полученных за каждый элемент оценивания, указанный в билете (ответ на устный вопрос; просмотр текста и ответ на вопрос по нему; полный письменный перевод текста). Итоговая оценка по дисциплине рассчитывается как отношение суммы оценок к количеству полученных оценок (три). При проведении оценивания по вопросам и заданиям, указанным в билете, в ходе промежуточной аттестации преподаватель может учитывать результаты текущего контроля.

Промежуточная аттестация: Зачет, 3 семестр.

Промежуточная аттестация: Экзамен, 4 семестр.

7. Оценочные материалы текущего контроля

Раздел 3. Профессионально-ориентированный иностранный язык

Контролируемые ИДК: УК-4.1 УК-4.2 УК-4.3 УК-4.4

Тема 3.2. Моя специальность: История изучаемой науки и видные ученые

Форма контроля/оценочное средство: Реферат

8. Оценочные материалы промежуточной аттестации

1 семестр, Зачет

Контролируемые ИДК: УК-4.1 УК-4.2 УК-4.3 УК-4.4

Вопросы/Задания:

1. Переведите предложения на английский язык.

Мой дядя – ученый.

2. Переведите предложения на английский язык.

Я родом из Бразилии.

3. Переведите предложения на английский язык.

Супермаркет находится недалеко от нашего дома.

4. Переведите предложения на английский язык.

Джон не был голоден.

5. Переведите предложения на английский язык.

Мы болеем.

6. Переведите предложения на английский язык.

Дети были в школе

7. Переведите предложения на английский язык.

Ключи будут на столе.

8. Переведите предложения на английский язык.

Билеты не будут дешевыми.

9. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

He (to work) every day

10. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

She (to listen to) music for two hours

11. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

Vegetables (to buy) by them every evening

12. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

You (to play) soccer on Fridays?

13. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The flowers (to water) by her every morning?

14. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

They (not to buy) anything two days ago

15. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The car (to repair) yesterday by him

16. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The shops (not to close) by them two days ago

17. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

They (not to read) tomorrow

18. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The war (to stop) by them next year

19. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

They (to build) the bridge now

20. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The chairs (to sell) by them at the moment

21. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

When I saw them, they (to walk) in the park

22. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

I just (to finish) my report

23. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The work already (to do) by him

24. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

You (to invite) already by them?

25. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

By the time he got to the bus stop, the bus (to go) already

26. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

I (to finish) this work by next Friday

27. Раскройте скобки, соблюдая правила построения утверждений, отрицаний и вопросов во всех временах и залогах в английском языке

The letter (to deliver) by next morning

28. Откройте скобки, поставив глаголы в правильную форму страдательного залога

I can't give you these articles. They (translate) now.

29. Откройте скобки, поставив глаголы в правильную форму страдательного залога

English (speak) all over the world.

30. Откройте скобки, поставив глаголы в правильную форму страдательного залога

My dress is clean now. It (wash).

31. Откройте скобки, поставив глаголы в правильную форму страдательного залога

These houses (build) in 1500.

32. Откройте скобки, поставив глаголы в правильную форму страдательного залога

This film (discuss) at the next lesson.

33. Откройте скобки, поставив глаголы в правильную форму страдательного залога

Wait a little! Your question (receive) by next Sunday.

34. Откройте скобки, поставив глаголы в правильную форму страдательного залога

The UK (wash) by the Atlantic Ocean and the North Sea.

35. Откройте скобки, поставив глаголы в правильную форму страдательного залога

Rugby (play) since 1845.

36. Откройте скобки, поставив глаголы в правильную форму страдательного залога

All the questions on the paper must (answer).

2 семестр, Зачет

Контролируемые ИДК: УК-4.1 УК-4.2 УК-4.3 УК-4.4

Вопросы/Задания:

1. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The flag of the UK is known as the Union Jack. It has its history. It all began in 1603 when Scotland was joined to England and Wales. The flag is made up of 3 crosses. The upright cross is the Cross of St. Jeorge the patron saint of England. The white diagonal cross is the cross of St. Andrew, the patron saint of Scotland. The red diagonal cross is the cross is the cross of St. Patrick, the patron saint of Ireland. All of them are on the blue background. The national anthem is . The national currency is pound. Geographically the island of Great Britain is subdivided into 2 main regions: Lowland Britain and Highland Britain. Lowland Britain comprises southern and eastern England. Highland Britain consists of Scotland, most of Wales, the Pennines (or the Pennine Chain) and the Lake District. The highest mountain top is Ben Nevis in Scotland. The chief rivers of Great Britain are: the Severn, separating England and Wales, the Thames (the longest and the deepest one). The swiftest flowing river is the Spray. Also the Tweed is famous (the woolen fabric is made here). Every country in the UK has its own national emblem. The red rose is the national emblem of England, the thistle is the national emblem of Scotland, the daffodils and the leek are the emblems of Wales, and the shamrock (a kind of clover) is the emblem of Ireland.

2. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The United Kingdom is a constitutional monarchy. It has a monarch - a King or a Queen. The present British monarch is Queen Elizabeth the Second. She become Queen in 1952. The monarch has little power and can reign with the support of Parliament. British Parliament is the legislative body at the country. It consists of two Houses. The House of Commons and House of Lords. Parliament and the monarch have different roles in the Government of the country. In reality, the House of Commons

has truth power. It introduces new bills. Then they go to the House of Lords for approval. The functions of the Queen are: to open the sessions of the Parliament, to head the commonwealth, to be Commander-in-Chief, to declare the war, to make peace. The house of commons is made up of 650 elected knows of members of parliament. The party which has the majority of suits in the Government and its leader usually becomes prime minister. The prime minister forms his or her Cabinet Ministers. The chairman of the House of Commons is the Speaker. The chairman of the House of Lords is the Lord Chancellor. He sits on a special place, which is called the woolsack. It means that wool made England rich. The members of the House of Lords are not elected, there are live peers. There are several political parties in Great Britain. They are the Conservative, the Liberal, the Labor, the Social Democratic and the Communist parties. Prime minister of the country Boris Johnson is leader of the Conservative Party.

3. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

Siberia, in the north of Russia, is one of the coldest, harshest places on earth. Famed for its inhospitable climate, it is also mineral-wealthy and unexploited – a true frontier region. Although it has attracted mining companies for decades, the challenging landscape and conditions have meant they have only just begun to scratch the surface of the area's potential.

This could now be changing; as climate change leads to warmer temperatures, ice and permafrost are melting and potentially easing the mining process. The mining sector is the second biggest contributor to GDP in Russia, and is expected to continue to play an important role in its economy.

Mining in Siberia grew exponentially during the 20th century, as successive governments and leaders sought to take advantage of it. "The Siberian region is rich in minerals including coal, gold, diamond and iron ore," says Globaldata analyst Alok Shukla. "Coal is largely extracted from Kemerovo, Krasnoyarsk Krai, Sakha (Yakutia), Republic of Khakassia, and Irkutsk Oblast. Gold originates mainly from Krasnoyarsk Krai and Irkutsk Oblast."

Russia is responsible for 7% of global aluminium production, and 95% of this takes place in Siberia. It is home to Russia's largest coal mine, the Arshanovsky pit in the Khakassia Republic which opened in 2015. When at full capacity it is expected to produce 10 million tonnes of coal, and there are already plans to expand it further. Siberia and the Far East also hold 84% of Russia's known gold reserves.

But much remains unexplored or inaccessible in Siberia still, leaving the true mineral wealth of the region uncertain. In 2016, a mineral was discovered in Siberia unlike any ever found naturally occurring on earth. Instead it appears to be similar to lab-grown metal-organic frameworks. Such discoveries highlight the potential of a region so long hidden under ice and thick forests.

4. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

In recent years, climate change has been a much talked about issue, with many debates over its possible impact on the world, and some even going so far as to question its very existence. However, with the undeniable increase in greenhouse emissions on Earth, there can be no doubt that the earth is becoming warmer.

So what exactly does this mean for the future of our planet? In chilly places like the UK, we may think to ourselves: 'Finally, warmer weather!' But global warming will in fact cause extreme weather conditions, meaning that our winters would be even colder than they are now. More than that, warmer temperatures will lead to the melting of ice in the north and south poles, which in turn will lead to rising sea levels across the globe. This is particularly troubling for low coastal regions such as Florida in the USA which would be among the first to be flooded, along with many islands around the world, including the United Kingdom. In 1000 years or so, all these places and more will be submerged underwater.

So where will be able to live? Unless we can find a way to evolve into mermaids and mermen, which doesn't look promising, the only solution is to move elsewhere. There will be little choice left once a large proportion of the land is lost to the sea, and other remaining places will be so hot that they will be absolutely impossible to survive in. It is possible, then, that the once frozen poles of the Arctic and Antarctica will be suitable enough to live in, having melted its ice and warmed up.

It's a scary thought to imagine such devastation on Earth. Perhaps if people start to realize how their

actions now can have such a profound impact on future generations, they will change their attitude and start to think more about caring for the environment, in order to save it.

5. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

Inland Weather in Wales

The higher you get in Wales, the colder and wetter it gets. And as you move away from the coasts, Wales is quilted with river valleys separated by increasingly higher hills. The Brecon Beacons in south Wales, are softly rolling but enormous, windswept hills where winter temperatures below freezing and snowfalls are not uncommon. Further north, in the inland mountains of Snowdonia National Park, heavy precipitation can be extreme. One mountain peak, Crib Goch, may be the wettest place in the entire country with an astonishing 176 inches of rainfall annually.2 And on the highest peaks, it snows a great deal.

Mount Snowdon, at 3,560 feet and the highest U.K. mountain south of Scotland, can experience snowfall from October to May.

Snowfall at lower altitudes is rare, with an average of only 10 days a year with snow lying on the ground in the south and west Wales. On the other hand, the mountains of Snowdonia average 30 days a year with snowfall lying on the ground.

Autumn and Winter in Wales

In September, temperatures linger in the 60s but fall away rapidly through October and November into the high 40s. January and February are the coldest months with temperatures hovering around freezing or slightly above in higher areas and in the high 40s along the coast. Temperatures at night are usually 10 to as much as 15 degrees Fahrenheit colder depending on where you are in the country.

October through January are the wettest months. Rain tends to fall in short, sharp and very heavy showers. November is particularly squally with rain accompanied by gusty winds.

6. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

Scotland is a country in the north of Great Britain. It is a part of the United Kingdom. Scotland is divided into three natural regions: the Southern Uplands, the Central Lowlands and the Highlands and islands. A lot of places in Scotland are a natural paradise, still untouched by man.

The capital of Scotland is Edinburgh, well known for its castle. Glasgow is the industrial capital of Scotland. It is the third largest city in Great Britain. The typical products of Scotland are timber, whisky, salmon. Golf is the Scottish natural sport and it seems to have originated in this country.

Scotland is also the land of myths and mysteries; every castle has its ghost. Glamis Castle is said to have nine of them. And of course everyone knows about the Loch Ness Monster. 'Nessie" is said to be about six meters long, with a long, thin neck. The first report of the monster in Loch Ness was in 565 A.D. Since 1934, thousands of people claimed to they had seen the monster. Scientists have investigated the Loch and taken pictures but no scientific explanation of the mystery has been given.

Scotland is the north part of Great Britain. Five million people live in Scotland. Edinburgh is the capital of Scotland.

7. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The London Eye, or the Millennium Wheel, is a cantilevered observation wheel on the South Bank of the River Thames in London. It is Europe's tallest cantilevered observation wheel, and is the most popular paid tourist attraction in the United Kingdom with over 3 million visitors annually. It has made many appearances in popular culture.

The structure is 135 metres (443 ft) tall and the wheel has a diameter of 120 metres (394 ft). When it opened to the public in 2000 it was the world's tallest Ferris wheel. Its height was surpassed by the 167 metres (548 ft) High Roller (Las Vegas) in 2014. Supported by an A-frame on one side only, unlike the taller Nanchang and Singapore wheels, the Eye is described by its operators as "the world's tallest cantilevered observation wheel".

The London Eye used to offer the highest public viewing point in London until it was superseded by the 245-metre-high (804 ft) observation deck on the 72nd floor of The Shard, which opened to the public on 1 February 2013.

In March 2020, the London Eye celebrated its 20th birthday by turning several of its pods into experiences themed around London, in partnership with its sponsor lastminute.com. The special experiences included a pub in a capsule, a west end theatre pod and a garden party with flower arrangements to represent the eight London Royal parks.

8. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The Shard, located in London, is one of the most iconic skyscrapers in the United Kingdom and a prominent feature of the city's skyline. Completed in 2012, it was designed by the renowned architect Renzo Piano and stands at a height of 310 meters (1,016 feet), making it the tallest building in the UK and the fifth tallest in Europe. The Shard's unique design resembles a shard of glass, with its tapering form and reflective façade that changes appearance with the weather and time of day.

The construction of The Shard began in 2009 and was part of a larger redevelopment project for London Bridge Station and its surrounding area. The building consists of 95 floors, with a mix of office space, restaurants, a hotel, and residential apartments. The top floors house an observation deck known as "The View from The Shard," which offers breathtaking panoramic views of London and beyond, attracting millions of visitors each year.

One of the most notable features of The Shard is its innovative use of glass. The façade is made up of 11,000 glass panels that create a shimmering effect, allowing natural light to flood the interior spaces while providing stunning views for those inside. The building is also designed with sustainability in mind; it incorporates energy-efficient systems and has achieved a BREEAM rating for its environmental performance.

The Shard has become a symbol of modern London and is often featured in films, television shows, and promotional materials for the city. Its presence has also spurred further development in the surrounding area, contributing to London's status as a global financial hub.

In addition to its architectural significance, The Shard has played host to various cultural events and exhibitions since its opening. It has become a popular venue for corporate events, weddings, and private functions due to its stunning views and luxurious amenities.

Overall, The Shard represents not only an architectural achievement but also a testament to London's ongoing evolution as a vibrant metropolis. Its striking design and multifunctional use make it an essential part of the city's landscape and an enduring attraction for both locals and tourists alike.

9. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

As one of the world's leading cities, London is at the forefront of addressing climate change and environmental sustainability. The Greater London Authority (GLA) has set an ambitious target to achieve net-zero carbon emissions by 2030. This goal reflects a commitment to creating a cleaner, healthier, and more sustainable urban environment for current and future generations.

Understanding the Zero Carbon Target

The zero carbon target means that London aims to balance the amount of greenhouse gases emitted with the amount removed from the atmosphere. This involves reducing emissions across various sectors, including transportation, buildings, energy production, and waste management. The target is not just about reducing carbon footprints but also about fostering resilience against climate impacts.

To achieve its zero carbon goal, London is implementing strategies across several key areas:

Energy Efficiency in Buildings: A significant portion of London's emissions comes from buildings. The GLA is promoting retrofitting existing structures to improve energy efficiency and encouraging new developments to meet stringent sustainability standards. Initiatives include the London Plan, which mandates higher energy performance standards for new buildings.

Renewable Energy Transition: Increasing the use of renewable energy sources is crucial for reducing carbon emissions. London aims to expand solar energy installations, wind power projects, and other renewable technologies. The city is also exploring community energy schemes that empower residents to generate and share renewable energy.

Sustainable Transport: Transportation is another major contributor to London's carbon footprint. The city is investing in public transport infrastructure, expanding cycling networks, and promoting electric vehicles (EVs). Initiatives like the Ultra Low Emission Zone (ULEZ) aim to reduce air pollution and encourage cleaner modes of transport.

Waste Management: Reducing waste and increasing recycling rates are essential components of London's sustainability strategy. The city is working towards a circular economy model that minimizes waste generation and maximizes resource recovery through recycling and composting programs.
Innovation and Technology
London recognizes that innovation plays a critical role in reaching its zero carbon goal. The city is investing in smart technologies that enhance energy efficiency and reduce emissions. This includes smart grids for better energy management, data analytics for optimizing transport systems, and digital platforms that facilitate sustainable practices among residents.

London's zero carbon target represents a bold vision for a sustainable future—a future where economic growth does not come at the expense of environmental health. By prioritizing energy efficiency, renewable energy adoption, sustainable transport solutions, waste reduction strategies, community engagement, and technological innovation, London aims to lead by example in the global fight against climate change. Achieving this ambitious goal will not only benefit the environment but also enhance the quality of life for all Londoners by creating a cleaner, greener city for generations to come.

10. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The climate of the United Kingdom is characterized by its temperate maritime conditions, which result in relatively mild temperatures, moderate rainfall, and a lack of extreme weather events compared to many other regions. However, the UK is not immune to the impacts of climate change, which pose significant challenges to its environment, economy, and society. Understanding the current climate dynamics and the implications of climate change is crucial for developing effective strategies for mitigation and adaptation.
The UK experiences four distinct seasons, with average temperatures ranging from about 1°C (34°F) in winter to 20°C (68°F) in summer. Rainfall is distributed fairly evenly throughout the year, with some regions, particularly in the west and north, receiving significantly more precipitation than others. The climate varies across the country:
Southern England: Generally warmer and drier, with milder winters.
Northern England and Scotland: Cooler temperatures and higher rainfall.
Coastal Areas: Influenced by maritime conditions, leading to milder winters but also increased vulnerability to storms and flooding.
The effects of climate change are becoming increasingly evident in the UK:
Rising Temperatures: Average temperatures have increased by approximately 1°C since the late 19th century. This trend is expected to continue, leading to hotter summers and milder winters.
Increased Rainfall and Flooding: While overall rainfall may not significantly increase, extreme weather events are becoming more frequent. Heavy rainfall can lead to flooding, particularly in urban areas with inadequate drainage systems.
Sea Level Rise: Coastal areas are at risk due to rising sea levels caused by melting ice caps and thermal expansion of seawater. This threatens communities, infrastructure, and ecosystems along the coast.
Biodiversity Loss: Changing climates can disrupt ecosystems and habitats, leading to shifts in species distribution and increased risks for native wildlife.
Climate Adaptation Strategies: The government is developing strategies to adapt to climate impacts through improved infrastructure resilience, flood defenses, and sustainable land management practices.
Investment in Renewable Energy: The UK has made significant strides in transitioning to renewable energy sources such as wind (both onshore and offshore), solar power, and biomass. This shift aims to reduce reliance on fossil fuels and lower carbon emissions.
Local communities play a vital role in addressing climate change. Initiatives such as community-led renewable energy projects, tree planting campaigns, and local sustainability programs empower residents to take action at a grassroots level. Public awareness campaigns also aim to educate citizens about their carbon footprints and encourage sustainable practices.
The UK's climate presents both challenges due to the impacts of climate change and opportunities

for innovation towards a sustainable future. By committing to ambitious targets like net-zero emissions, investing in renewable energy sources, engaging communities in sustainability efforts, and adapting infrastructure for resilience against extreme weather events, the UK aims not only to mitigate its own environmental impact but also to serve as a global leader in addressing one of humanity's most pressing issues—climate change. As these efforts continue to evolve, they will shape the future landscape of both the environment and society across the nation.

11. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The population of the United Kingdom (UK) is a dynamic and diverse entity, reflecting a rich tapestry of cultures, ethnicities, and histories. As of 2023, the estimated population stands at approximately 67 million people, making the UK one of the most populous countries in Europe. Understanding the demographic trends and characteristics of the UK population is essential for addressing social, economic, and political challenges.

The UK is characterized by its multicultural society. The population includes a wide range of ethnic groups, with White British being the largest demographic, followed by significant communities of South Asian, Black, Mixed, and other ethnic backgrounds. Major cities like London, Birmingham, Manchester, and Leicester are particularly known for their cultural diversity. London alone is home to over 300 languages spoken by its residents.

The UK has experienced fluctuating population growth rates over the years. Following a period of steady growth in the early 21st century, recent trends indicate a slowdown in growth due to various factors such as declining birth rates and changes in immigration patterns. The fertility rate in the UK has fallen below the replacement level of 2.1 children per woman, leading to concerns about an aging population.

One of the most significant demographic challenges facing the UK is its aging population. Advances in healthcare and living standards have contributed to increased life expectancy, which currently averages around 81 years. As a result, the proportion of older adults (aged 65 and over) is rising rapidly. This shift presents challenges for healthcare services, pensions, and social care systems as they adapt to meet the needs of an older demographic.

Migration has played a crucial role in shaping the UK’s population dynamics. Historically a destination for immigrants seeking better opportunities, recent years have seen changes in migration patterns due to political events such as Brexit and global crises like the COVID-19 pandemic. While net migration has fluctuated, it remains a vital component of population growth and contributes to workforce diversity.

The population of the United Kingdom is characterized by its diversity and complexity. As it navigates challenges such as an aging demographic and changing migration patterns, understanding these dynamics will be crucial for shaping effective policies that promote social cohesion and economic stability. By embracing its multicultural identity while addressing regional disparities and demographic shifts, the UK can work towards a future that benefits all its residents.

12. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The economy of the United Kingdom (UK) is one of the largest and most developed in the world, characterized by a diverse range of industries, a strong services sector, and a significant global presence. As of 2023, the UK economy is recovering from the impacts of the COVID-19 pandemic and navigating challenges such as inflation, supply chain disruptions, and geopolitical uncertainties.

The UK economy is primarily service-oriented, with services accounting for approximately 80% of GDP. Key sectors include finance, healthcare, education, retail, and tourism. London serves as a global financial hub, hosting numerous banks, investment firms, and insurance companies. The City of London and Canary Wharf are central to this financial activity, attracting international investment and talent.

Manufacturing remains an important part of the economy, contributing around 10% to GDP. The UK has a strong manufacturing base in industries such as aerospace, automotive, pharmaceuticals, and food production. Despite facing challenges from globalization and competition, British manufacturers continue to innovate and adapt to changing market demands.

The UK is a significant player in international trade. It exports goods and services worth hundreds of

billions annually, with major trading partners including the European Union (EU), the United States, China, and Japan. Key exports include machinery, vehicles, pharmaceuticals, and financial services.
Post-Brexit trade dynamics have shifted as the UK navigates new trade agreements outside the EU framework. The government has sought to establish free trade agreements with various countries to enhance market access for British businesses.
Despite its strengths, the UK economy faces several challenges:
Inflation: Rising inflation rates have impacted consumer purchasing power and business costs. The Bank of England has responded with monetary policy adjustments to stabilize prices.
Supply Chain Disruptions: Global supply chain issues have affected various sectors, leading to delays in production and increased costs for businesses.
Geopolitical Uncertainties: Ongoing geopolitical tensions can influence trade relationships and economic stability.
The economy of the United Kingdom is marked by its resilience and adaptability in the face of challenges. With a strong services sector at its core and ongoing efforts towards innovation and sustainability, the UK continues to play a vital role in the global economic landscape. As it navigates post-pandemic recovery while addressing inflationary pressures and labor market dynamics, strategic policies will be essential for fostering growth that benefits all segments of society.

13. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

London, the capital city of England and the United Kingdom, boasts a rich and diverse history that spans over two millennia. Its origins can be traced back to the Roman period when it was established as Londinium around AD 43. The Romans recognized the strategic importance of the River Thames for trade and transportation, leading to the rapid growth of the settlement. By the end of the first century, Londinium had developed into a bustling town with a population of around 60,000, complete with a forum, basilica, and defensive walls.
Following the decline of Roman rule in the early 5th century, London experienced a period of instability and fragmentation. The Anglo-Saxons began to settle in the area, and by the 9th century, it had become an important trading hub known as Lundenwic. However, this prosperity was threatened by Viking invasions, leading to the establishment of fortified settlements.
The Norman Conquest in 1066 marked a significant turning point in London's history. William the Conqueror built the Tower of London as a symbol of power and control over the city. The subsequent centuries saw London grow in importance as a political and economic center. The establishment of institutions such as Parliament and the Church further solidified its status.
The medieval period was marked by significant events such as the Black Death in 1348, which decimated London's population but also led to social and economic changes. The city continued to expand during the Tudor period, becoming a cultural hub under monarchs like Henry VIII and Elizabeth I.
The Great Fire of London in 1666 was another pivotal moment that reshaped the city. It destroyed much of medieval London but also provided an opportunity for reconstruction. Sir Christopher Wren played a crucial role in redesigning St. Paul's Cathedral and other buildings that defined London's skyline.
The Industrial Revolution in the 18th and 19th centuries transformed London into one of the world's largest cities. It became a center for finance, trade, and industry, attracting millions from rural areas and abroad. This rapid urbanization brought challenges such as overcrowding and pollution but also led to advancements in infrastructure, including railways and public transport.
The 20th century saw London endure two World Wars, which caused significant destruction but also fostered resilience among its inhabitants. Post-war reconstruction efforts led to modernization while preserving historical landmarks.
Today, London is a vibrant global city known for its cultural diversity, economic significance, and historical heritage. From its Roman roots to its status as a modern metropolis, London's history is a testament to its ability to adapt and thrive through centuries of change.

14. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

Moscow, the capital city of Russia, has a rich and complex history that dates back to its founding in the 12th century. The city was first mentioned in historical records in 1147 when Prince Yuri Dolgoruky invited other princes to a feast. Initially, Moscow was a small settlement on the banks of the Moskva River, but its strategic location made it an important center for trade and politics.
In the late 13th century, Moscow began to rise in prominence under the leadership of Prince Ivan I, also known as Ivan Kalita. He managed to consolidate power and expand the territory, establishing Moscow as a significant principality. The city became the center of the Russian Orthodox Church after the fall of Kiev to the Mongols in 1240, further enhancing its influence.
The Mongol invasion in the 13th century led to several decades of domination known as the "Tatar Yoke." Despite this oppression, Moscow gradually gained strength and autonomy. By the late 15th century, under Grand Prince Ivan III (Ivan the Great), Moscow successfully overthrew Mongol rule and expanded its territory significantly. Ivan III also initiated major construction projects, including the Kremlin's stone walls and towers, which still stand today.
The 16th century saw the rise of Ivan IV (Ivan the Terrible), who was crowned as Russia's first tsar in 1547. His reign marked both expansion and turmoil; while he expanded Russian territory into Siberia, his later years were characterized by paranoia and violence, leading to a period of instability after his death in 1584.

The Time of Troubles (1598-1613) followed, marked by political chaos and foreign intervention. This period ended with the establishment of the Romanov dynasty in 1613, which would rule Russia for over three centuries. Under Peter the Great in the late 17th and early 18th centuries, Moscow faced competition from St. Petersburg as a political center but remained culturally significant.
The 19th century brought significant changes with industrialization and social upheaval. The Decembrist revolt in 1825 highlighted growing discontent among Russian elites. The city also played a crucial role during events such as Napoleon's invasion in 1812 when much of Moscow was burned to prevent French forces from using it.
The early 20th century was marked by revolutionary fervor. The Bolshevik Revolution in 1917 led to significant political changes; Moscow became the capital of Soviet Russia and later the Soviet Union. Under communist rule, extensive urban development transformed Moscow into a symbol of Soviet power.
After World War II, Moscow emerged as a global superpower's capital during the Cold War era. The city continued to grow economically and culturally despite facing challenges such as political repression.
With the dissolution of the Soviet Union in 1991, Moscow underwent significant transformations as Russia transitioned towards a market economy. Today, it stands as a vibrant metropolis known for its rich history, diverse culture, and economic significance on both national and global stages.

15. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

Three Famous Places in London

London, a city steeped in history and culture, is home to numerous iconic landmarks. Among them, the Tower of London, Buckingham Palace, and the British Museum stand out as must-visit destinations that reflect the city’s rich heritage.

1. The Tower of London

The Tower of London, a UNESCO World Heritage Site, is one of the most famous historical landmarks in the city. Founded by William the Conqueror in 1066, this imposing fortress has served various roles throughout its history, including royal palace, prison, and treasury. The Tower is perhaps best known for housing the Crown Jewels, a stunning collection of royal regalia that includes crowns, scepters, and other ceremonial items. Visitors can explore its medieval architecture, learn about its storied past through guided tours led by the Yeoman Warders (commonly known as Beefeaters), and hear tales of intrigue and imprisonment associated with figures like Anne Boleyn and Sir Thomas More.

2. Buckingham Palace

Buckingham Palace serves as the official residence of the British monarch and is an enduring symbol of the British monarchy. Originally built in 1703 as a townhouse for the Duke of Buckingham, it became a royal residence in 1837 when Queen Victoria ascended to the throne. The palace features

775 rooms and is surrounded by beautiful gardens. One of its most popular attractions is the Changing of the Guard ceremony, which takes place daily during summer and every other day during winter. Visitors can also tour the State Rooms during certain months when they are open to the public, offering a glimpse into royal life and opulence.

3. The British Museum

The British Museum is one of the world's oldest and most comprehensive museums dedicated to human history and culture. Established in 1753, it houses an extensive collection of over eight million works from various civilizations across the globe. Highlights include the Rosetta Stone, which was key to deciphering Egyptian hieroglyphs; the Elgin Marbles from the Parthenon; and mummies from ancient Egypt. The museum's architecture is equally impressive, featuring a stunning glass-roofed Great Court that provides a modern contrast to its historic galleries. Admission to the museum is free, making it accessible to millions who come to explore its vast array of artifacts.

16. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The Center of London: A Vibrant Hub of Culture and History

The center of London is a bustling metropolis that serves as the heart of the United Kingdom's capital. This area is not only a financial powerhouse but also a cultural epicenter, rich in history and diversity. Spanning several boroughs, including Westminster and the City of London, the central area is home to iconic landmarks, world-class museums, and vibrant neighborhoods.

One of the most recognizable features of central London is its historic architecture. The Houses of Parliament, with the iconic Big Ben (now known as the Elizabeth Tower), stands majestically along the River Thames. This Gothic Revival masterpiece is not only a symbol of British democracy but also a UNESCO World Heritage Site. Nearby, Westminster Abbey has been the site of royal ceremonies for centuries, including coronations and weddings, making it a significant religious and historical landmark.

Just a short walk away lies Trafalgar Square, a lively public space that commemorates Admiral Nelson's victory at the Battle of Trafalgar. The square is adorned with the impressive Nelson's Column and is surrounded by notable institutions such as the National Gallery, which houses an extensive collection of European paintings. This area often hosts events and gatherings, making it a focal point for both locals and tourists.

Shopping enthusiasts flock to Oxford Street, one of Europe's busiest shopping streets, featuring over 300 shops ranging from high-street brands to luxury boutiques. Nearby Regent Street offers a more upscale shopping experience with its elegant architecture and flagship stores. For those seeking a more eclectic vibe, Covent Garden provides a mix of shops, street performances, and dining options in a charming setting.

Cultural experiences abound in central London. The West End is renowned for its theaters showcasing world-class productions ranging from classic plays to contemporary musicals. Visitors can enjoy everything from Shakespearean dramas to modern hits like "The Lion King" or "Hamilton." The area's vibrant nightlife also includes an array of pubs, bars, and restaurants offering diverse cuisines from around the globe.

Central London is well-connected by an extensive public transport system that includes buses and the iconic London Underground (the Tube). This accessibility makes it easy for visitors to explore various neighborhoods such as Soho, known for its lively atmosphere and nightlife; Chinatown, with its authentic Asian cuisine; and Southbank, which offers stunning views along the Thames River.

In addition to its historical significance and cultural offerings, central London is also home to green spaces like Hyde Park and St. James's Park. These parks provide a tranquil escape from the urban hustle and bustle where visitors can relax or enjoy outdoor activities.

In summary, the center of London is a dynamic blend of history, culture, shopping, and entertainment. Its iconic landmarks tell stories of Britain's past while contemporary attractions reflect its vibrant present. Whether you're exploring historic sites or indulging in modern experiences, central London offers something for everyone—a true testament to its status as one of the world's great cities.

17. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The center of Moscow is a vibrant and bustling area that serves as the heart of Russia's capital. Known for its rich history, stunning architecture, and cultural significance, this part of the city attracts millions of visitors each year. The blend of historical landmarks and modern developments creates a unique atmosphere that reflects both the past and the present.

At the core of Moscow lies the iconic Red Square, one of the most famous squares in the world. This UNESCO World Heritage Site is surrounded by remarkable structures, including the colorful St. Basil's Cathedral with its distinctive onion domes, which has become a symbol of Russia itself. The square also features the imposing walls of the Kremlin, a fortified complex that serves as the official residence of the President of Russia. The Kremlin is home to several palaces and cathedrals, showcasing stunning examples of Russian architecture and art.

Adjacent to Red Square is Lenin's Mausoleum, where visitors can pay their respects to the founder of the Soviet Union. The mausoleum stands as a reminder of Russia's tumultuous history and its impact on contemporary society. Nearby, GUM (Glavny Universalny Magazin), a historic department store with an elegant glass roof, offers a luxurious shopping experience with high-end boutiques and cafes.

Moscow’s central area is also known for its impressive metro system, often referred to as one of the most beautiful in the world. Many metro stations are adorned with intricate mosaics, chandeliers, and sculptures that reflect Soviet-era art and design. Stations like Komsomolskaya and Mayakovskaya are particularly noteworthy for their stunning aesthetics.

Cultural experiences abound in central Moscow. The Bolshoi Theatre is renowned for its ballet and opera performances, attracting art lovers from around the globe. Just a short walk away lies Tverskaya Street, one of Moscow’s main thoroughfares lined with shops, restaurants, and theaters. This bustling street epitomizes modern Moscow while still retaining elements of its historical charm.

For those seeking green spaces amidst the urban landscape, Gorky Park offers a refreshing escape. This expansive park features walking paths, open-air cafes, and recreational activities such as cycling and rollerblading. It serves as a popular gathering place for locals and tourists alike.

The center of Moscow is also home to numerous museums that showcase Russian art and history. The State Tretyakov Gallery houses an extensive collection of Russian fine art from various periods, while the Pushkin State Museum of Fine Arts features works from European masters.

As night falls, central Moscow transforms into a lively hub filled with nightlife options ranging from trendy bars to traditional Russian restaurants offering local cuisine. The illuminated skyline adds to the city’s charm as visitors enjoy evening strolls along the Moskva River or through historic streets.

18. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The Moscow Kremlin is one of the most iconic landmarks in Russia and serves as a powerful symbol of the nation’s history and political authority. Located in the heart of Moscow, this fortified complex has been the center of Russian power for centuries, housing the offices of the President of Russia and serving as a UNESCO World Heritage Site.

The Kremlin's history dates back to the 12th century when it was established as a wooden fort. Over the years, it evolved into a grand stone fortress, with its walls and towers constructed from red brick in the late 15th century under the direction of Italian architects. The Kremlin's imposing walls stretch for over two kilometers and are punctuated by 20 towers, each with its own unique design and historical significance. The most famous of these is the Spasskaya Tower, adorned with a clock that chimes on the hour and serves as a symbol of Moscow itself.

Within the Kremlin's walls lies a treasure trove of architectural marvels and historical sites. The Cathedral Square is at its heart, surrounded by three magnificent cathedrals: the Assumption Cathedral, where Russian tsars were crowned; the Archangel Cathedral, which houses the tombs of many Russian princes; and the Annunciation Cathedral, known for its stunning frescoes. These cathedrals showcase exquisite examples of Russian Orthodox architecture and art.

Another significant structure within the Kremlin is the Grand Kremlin Palace, which was built in the 19th century as a residence for Russian tsars. Today, it serves as an official residence for the President and hosts important state ceremonies. The palace features opulent interiors adorned with lavish decorations that reflect Russia’s imperial past.

The State Armory Museum (Оружейная Палата) is another highlight within the Kremlin complex. It houses an impressive collection of royal artifacts, including crowns, thrones, ceremonial weapons, and carriages used by Russian monarchs. Visitors can explore exhibits that showcase Russia’s rich

cultural heritage and craftsmanship.
The Kremlin is not only a historical site but also an active political center. It has witnessed significant events throughout Russian history, from grand coronations to pivotal political decisions. Today, it remains a symbol of national pride and authority.
Surrounding the Kremlin are beautiful gardens and parks that offer stunning views of this historic site. The Alexander Garden features well-maintained pathways, fountains, and monuments commemorating key figures in Russian history. Visitors can stroll through these green spaces while enjoying picturesque views of the Kremlin's towers.
Access to the Kremlin is available to tourists who wish to explore its rich history firsthand. Guided tours provide insights into its architectural wonders and historical significance while allowing visitors to appreciate its beauty up close.

19. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The Tower of London, one of the most famous landmarks in England, has a rich and complex history that spans over 1,000 years. Founded by William the Conqueror in 1066 as part of the Norman Conquest, the Tower was originally built to assert his power over the newly acquired territory. The White Tower, its central structure, is an impressive example of Norman military architecture and served as a royal palace and fortress.
Throughout its history, the Tower has played various roles: it has been a royal residence, a treasury, an armory, and even a menagerie. Its strategic location on the banks of the River Thames made it an essential defensive stronghold for London. The Tower's walls have witnessed numerous significant events, including royal ceremonies and political intrigue.
One of the most notorious aspects of the Tower's history is its use as a prison. Over the centuries, it has housed many high-profile prisoners, including Anne Boleyn, Thomas More, and Lady Jane Grey. The executions that took place within its walls have contributed to its dark reputation. Anne Boleyn was famously executed on Tower Green in 1536; her ghost is said to haunt the grounds to this day.
The Tudor period marked a significant transformation for the Tower. Under King Henry VIII, it became a symbol of royal power and authority. The infamous Beefeaters (Yeoman Warders) were established during this time to guard the Tower and its prisoners. Today, they serve as tour guides and custodians of its rich history.
In addition to its role as a prison, the Tower has also been a place of great ceremony. It is home to the Crown Jewels of England, which include some of the most magnificent regalia in the world. These treasures are displayed in a secure exhibition within the Tower and attract millions of visitors each year.
The 17th century saw further changes as the Tower's military significance diminished. It became more associated with ceremonial functions than with defense. However, it remained an important symbol of monarchy and national identity.
In 1840, Queen Victoria designated the Tower as a historical monument rather than an active fortress or prison. This shift marked the beginning of its transformation into a major tourist attraction. Restoration efforts were undertaken to preserve its structures and artifacts for future generations.
Today, the Tower of London is recognized as a UNESCO World Heritage Site and remains one of London's most visited attractions. Visitors come from around the globe to explore its storied past through guided tours that reveal tales of intrigue, betrayal, and royal grandeur.
The annual Ceremony of the Keys continues to be performed each night at precisely 9:53 PM—a tradition that dates back centuries—symbolizing that all gates are locked for security.

20. Выполните полный письменный перевод со словарем текста с английского языка на русский (1000-1200 п.зн. за 45 мин.)

The British Museum: A Chronicle of Human History
The British Museum, located in the heart of London, is one of the world's most renowned cultural institutions, dedicated to human history, art, and culture. Established in 1753, it was founded on the collections of Sir Hans Sloane, a physician and naturalist who bequeathed his vast array of artifacts to the nation. The museum opened its doors to the public in 1759, making it one of the first public museums in the world.

From its inception, the British Museum aimed to make knowledge accessible to all. Its founding principle was to collect and preserve objects that represented the diversity of human experience. The museum's original collection included around 71,000 items, ranging from antiquities to natural specimens. Over time, this collection has expanded exponentially and now encompasses over eight million objects.

The museum's architecture is as impressive as its collections. The original building was designed by Sir Robert Smirke in a neoclassical style and features the iconic Great Court (Большой Двор), which was completed in 2000. The Great Court houses the stunning glass-roofed Reading Room and serves as a central hub for visitors.

One of the most significant aspects of the British Museum is its vast collection of artifacts from ancient civilizations. Among its most famous exhibits are the Rosetta Stone, which played a crucial role in deciphering Egyptian hieroglyphs; the Elgin Marbles from the Parthenon in Athens; and an extensive collection of Egyptian mummies. These items not only showcase artistic achievement but also provide invaluable insights into ancient cultures.

Throughout its history, the museum has been at the center of debates regarding cultural heritage and repatriation. Many artifacts were acquired during periods of colonial expansion, leading to ongoing discussions about their rightful ownership. The museum has faced criticism for holding items that some argue should be returned to their countries of origin. In response, it has engaged in dialogue with various nations regarding cultural restitution while emphasizing its role in preserving global heritage.

The British Museum has also played a significant role in education and research. It offers numerous programs for schools and communities, aiming to foster understanding and appreciation for world cultures. Scholars from around the globe utilize its extensive library and archives for research purposes.

In addition to its permanent collections, the museum hosts temporary exhibitions that explore specific themes or cultures in greater depth. These exhibitions often draw on loans from other institutions or private collections, further enriching visitors' experiences.

Today, the British Museum attracts millions of visitors each year from all corners of the globe. It remains free to enter (though some special exhibitions may charge), reflecting its commitment to accessibility and public engagement with history and culture.

21. Просмотрите текст и ответьте на вопрос: Why do we call Russia the largest county in the world?

Located in the north, west and east latitudes of the Northern Hemisphere, most of Russia is much closer to the North Pole than to the equator. Individual country comparisons are of little value in gauging Russia's enormous size and diversity. The country's 17.1 million square kilometers include one-eighth of the Earth's inhabited land area. Its European portion, which occupies a substantial part of continental Europe, is home to most of Russia's industrial and agricultural activity and is where, roughly between the Dnieper River and the Ural Mountains, the Russian Empire took shape. Russia includes the entire northern portion of Asia.

From west to east, the country stretches from Kaliningrad to Ratmanov Island in the Bering Strait. This distance is roughly equivalent to the distance from Glasgow, Scotland, to Nome, Alaska. From north to south, the country ranges from the northern tip of the Russian Arctic islands at Franz Josef Land to the southern tip of the Republic of Dagestan on the Caspian Sea, spanning about 4,500 kilometres of extremely varied, often inhospitable terrain.

Extending for 57,792 kilometres, the Russian border is the world's longest.

22. Просмотрите текст и ответьте на вопрос: Why are there no skyscrapers in Washington, D.C?

One can hardly find a park, a square or an open area in Washington without a monument or a memorial. The most impressive and the best-known ones are the Lincoln Memorial and the Washington Monument. There are some important museums in Washington where you can see all kinds of things: famous paintings and sculptures, the dresses of President’s wives, the original of the Declaration of Independence, the largest blue diamond in the world, etc. There are 5 universities in

Washington.
There are no skyscrapers in Washington, because they would hide the city's many monuments from view. No building in the city may be more than 40 meters tall. Thousands of tourists visit Washington every day. People from all parts of the United States come to see then- capital.
The Jefferson Memorial was built in memory of the third President of the USA, Thomas Jefferson, who was also the author of the Declaration of Independence. The memorial is surrounded by cherry-trees. The Lincoln Memorial devoted to the memory of the 16th President of the US, the author of the Emancipation Proclamation, which gave freedom to Negro slaves in America.

23. Просмотрите текст и ответьте на вопрос: What factors contribute to the air pollution problem?

Air pollution and climate change.
Problem: Overloading of the atmosphere and of ocean waters with carbon. Atmospheric CO2 absorbs and re-emits infrared-wavelength radiation, leading to warmer air, soils, and ocean surface waters - which is good: The planet would be frozen solid without this.
Unfortunately, there's now too much carbon in the air. Burning of fossil fuels, deforestation for agriculture, and industrial activities have pushed up atmospheric CO2 concentrations from 280 parts per million (ppm) 200 years ago, to about 400 ppm today. That's an unprecedented rise, in both size and speed. The result: climate disruption.
Carbon overloading is only one form of air pollution caused by burning coal, oil, gas and wood. The World Health Organization recently estimated that one in nine deaths in 2012 were attributable to diseases caused by carcinogens and other poisons in polluted air.
Solutions: Replace fossil fuels with renewable energy. Reforestation. Reduce emissions from agriculture. Change industrial processes.
The good news is that clean energy is abundant - it just needs to be harvested. Many say a 100 percent renewable-energy future is feasible with existing technology now.
But the bad news is that even though renewable energy infrastructure - solar panels, wind turbines, energy storage and distribution systems - are already widespread, and getting cheaper and more efficient all the time, experts say we're not applying them quickly enough to prevent catastrophic climate disruption. Barriers in policy and finance remain to be overcome.

24. Просмотрите текст и ответьте на вопрос: What factors contribute to the pollution problem?

WE MUST PROTECT OUR ENVIRONMENT
Our country. Our environment. There are many big and small rivers, green forests, high mountains, lakes and seas in Russia. Our Earth is our home. I think people must take care of our Motherland. But the problem of pollution now is very important. There are some factors that increase the problem.
First of all, our plants and factories put their waste materials into water and atmosphere and pollute the environment. There are many kinds of transport in our cities. We can’t ignore their effect on the environment, that is why we must pay attention to the protection of our nature and the health of the people.
Radiation. Now it has become one of the main problems. It is not good for health of people. Many people died from radiation some years ago in Chernobol. It was a tragedy. The other problem is an earthquake. We know some terrible earthquakes in Chile, Haiti, Japan. Our scientists try to forecast earthquakes, then we can protect ourselves from them.

25. Просмотрите текст и ответьте на вопрос: What are key features of the green economy?

KEY FEATURES OF THE GREEN ECONOMY
Simply put, a green economy is low-carbon, resource efficient, and socially inclusive. Some of it's key features include:
Abundant opportunities for good green jobs that pay a living wage.
A price on carbon, either through a cap-and-trade program or an economy-wide tax on carbon.
More efficient use of energy and other resources. For example, huge economic and environmental gains could be made if we had more energy efficient buildings and transportation.
Greater use of renewable resources, like wind and solar, instead of non-renewable resources, such as coal and oil.

Greener manufacturing which is resource efficient and doesn't use toxic chemicals
Proper value assigned to natural environments and ecosystems, in recognition of all the services the environment provides such as carbon sequestration, flood protection, and waste water treatment.
A robust recycling and reuse industry, with minimal waste sent to landfill.

26. Просмотрите текст и ответьте на вопрос: Why is it important to plant and restore forests?

Deforestation.
Problem: Species-rich wild forests are being destroyed, especially in the tropics, often to make way for cattle ranching, soybean or palm oil plantations, or other agricultural monocultures.
Today, about 30 percent of the planet's land area is covered by forests - which is about half as much as before agriculture got started around 11,000 years ago. About 7.3 million hectares (18 million acres) of forest are destroyed each year, mostly in the tropics. Tropical forests used to cover about 15 percent of the planet's land area; they're now down to 6 or 7 percent. Much of this remainder has been degraded by logging or burning.
Not only do natural forests act as biodiversity reserves, they are also carbon sinks, keeping carbon out of the atmosphere and oceans.
Solutions: Conserve of what's left of natural forests, and restore degraded areas by replanting with native tree species. This requires strong governance - but many tropical countries are still developing, with increasing populations, uneven rule-of-law, and widespread cronyism and bribery when it comes to allocating land use.

27. Просмотрите текст и ответьте на вопрос: What is green economy?

WHAT IS THE GREEN ECONOMY?
Today, many people realize that it's not about the environment versus the economy, not a tradeoff between unemployment and pollution. It's not about picking one or the other.
We cannot choose between the environment and the economy. We need both.
This realization is at the heart of an emerging economic and environmental concept, often termed " the green economy."
It reflects a growing recognition that, on the one hand, the challenge of sustainability rests almost entirely in getting the economy right. Putting a price on carbon, valuing natural capital and ending perverse subsidies, among other things, are all vital to meaningful environmental reform.
And, on the other hand, if we wish to create a sustainable economy, we must pay more attention to the environment. Against a backdrop of climate change, resource scarcity, the massive loss of biodiversity and a variety of other environmental issues, business as usual is increasingly risky.
The green economy was initially driven by an environmental imperative, the recognition that climate change and ecological degradation threaten our future prosperity. But today, it is driven equally by opportunity, the recognition that a green economy opens up new possibilities for jobs and growth. As a recent report from the U.N. put it, "the greening of economies is not generally a drag on growth but rather a new engine of growth…a net generator of decent jobs…"

28. Просмотрите текст и ответьте на вопрос: "What are the pivotal moments in the history of medieval London?

London, the capital city of England and the United Kingdom, boasts a rich and diverse history that spans over two millennia. Its origins can be traced back to the Roman period when it was established as Londinium around AD 43. The Romans recognized the strategic importance of the River Thames for trade and transportation, leading to the rapid growth of the settlement. By the end of the first century, Londinium had developed into a bustling town with a population of around 60,000, complete with a forum, basilica, and defensive walls.
Following the decline of Roman rule in the early 5th century, London experienced a period of instability and fragmentation. The Anglo-Saxons began to settle in the area, and by the 9th century, it had become an important trading hub known as Lundenwic. However, this prosperity was threatened by Viking invasions, leading to the establishment of fortified settlements.
The Norman Conquest in 1066 marked a significant turning point in London's history. William the Conqueror built the Tower of London as a symbol of power and control over the city. The subsequent centuries saw London grow in importance as a political and economic center. The

establishment of institutions such as Parliament and the Church further solidified its status.
The medieval period was marked by significant events such as the Black Death in 1348, which decimated London's population but also led to social and economic changes. The city continued to expand during the Tudor period, becoming a cultural hub under monarchs like Henry VIII and Elizabeth I.
The Great Fire of London in 1666 was another pivotal moment that reshaped the city. It destroyed much of medieval London but also provided an opportunity for reconstruction. Sir Christopher Wren played a crucial role in redesigning St. Paul's Cathedral and other buildings that defined London's skyline.
The Industrial Revolution in the 18th and 19th centuries transformed London into one of the world's largest cities. It became a center for finance, trade, and industry, attracting millions from rural areas and abroad. This rapid urbanization brought challenges such as overcrowding and pollution but also led to advancements in infrastructure, including railways and public transport.
The 20th century saw London endure two World Wars, which caused significant destruction but also fostered resilience among its inhabitants. Post-war reconstruction efforts led to modernization while preserving historical landmarks.
Today, London is a vibrant global city known for its cultural diversity, economic significance, and historical heritage. From its Roman roots to its status as a modern metropolis, London's history is a testament to its ability to adapt and thrive through centuries of change.

29. Просмотрите текст и ответьте на вопрос: What time does London’s origin trace back?

London's origins trace back to a strategic decision by Roman invaders in 43 AD, when Emperor Claudius established Londinium as a key military and trading settlement. This foundational period shaped the city's enduring character through several critical developments:
Roman Establishment (43-60 AD)
- Founded as a river port at the narrowest Thames crossing point
- Initial settlement covered 1.4 km² (modern City of London area)
- Strategic location connected roads to major Roman British towns

Boudican Revolt & Rebuilding (60-120 AD)
- Destroyed in 60 AD by Iceni tribe led by Queen Boudica (королева Боадицея), a queen of the ancient British Iceni tribe (племя иценов), who led a failed uprising against the conquering forces of the Roman Empire in AD 60 or 61.
- Reconstructed with improved stone defenses and grid-pattern streets
- Built first London Bridge (wooden, near modern bridge location)

Peak Roman Development (2nd-4th Century)
- Became provincial capital of Britannia by 100 AD
- Constructed major infrastructure:
  - Basilica (largest north of Alps)
  - Amphitheater (discovered under Guildhall)
  - 3 km defensive wall (sections still visible)
- Reached population of 30,000-45,000

Key Foundations for Future Growth
- Established as England's first international trade hub
- Created enduring street patterns still visible today
- Built original Thames embankments
- Developed as administrative center (traits continuing today)

Decline and Transition (5th Century)
- Roman withdrawal around 410 AD led to urban decline
- Settlement continued at reduced scale (Saxon Lundenwic)
- Original walls maintained through Middle Ages

The Roman foundation established London's lasting advantages: strategic location, commercial orientation, and administrative importance - qualities that would eventually propel it to global prominence.

30. Просмотрите текст и ответьте на вопрос: “What are the key economic changes London has undergone in the 21st Century (2000–Present) “

London’s Transformation in the 21st Century (2000–Present)

Since 2000, London has undergone dramatic changes, solidifying its status as a global city while facing new challenges. From urban regeneration to economic shifts, the capital has evolved in response to globalization, technological advances, and socio-political changes.

1. Urban Regeneration & Architecture

- The Shard (Шард – название небоскреба ввиде «осколка» (2012): Europe’s tallest skyscraper (310m), symbolizing modern London.
- Olympic Legacy (2012): Stratford’s transformation with Queen Elizabeth Olympic Park and new neighborhoods.
- Crossrail (Elizabeth Line, 2022): Europe’s largest infrastructure project, improving east-west transit.

2. Economic Shifts

- Tech Boom: Rise of "Silicon Roundabout" (Old Street) as a rival to California’s tech hubs.
- Brexit Impact: Financial sector adjustments, though London remains Europe’s top financial center.
- Green Economy: Growth in renewable energy startups and low-emission policies (ULEZ expansion).

3. Cultural & Demographic Changes

- Population Growth: From 7.2 million (2000) to nearly 9 million today.
- Super-Diversity: Over 300 languages spoken; 45% of residents foreign-born.
- Cultural Landmarks: Tate Modern extension (2016), V&A East (2025).

4. Challenges

- Housing Crisis: Soaring prices push residents farther out; "Generation Rent" struggles.
- Climate Resilience: Flood risks (Thames Barrier upgrades) and urban heat island effect.
- Social Inequality: Wealth gaps widen despite economic growth.

The Future of London

31. Просмотрите текст и ответьте на вопрос: “ Why are smart homes and low-power devices considered to be key solutions for sustainable living? “

Smart Homes and Low-Power Devices: Green Technology for Sustainable Living

As energy demands rise and environmental concerns grow, smart homes and low-power devices are emerging as key solutions for sustainable living. By integrating energy-efficient technologies with automation, modern households can significantly reduce electricity consumption, minimize waste, and lower carbon footprints.

Smart homes use IoT (Internet of Things) devices to optimize energy usage by:

- Automated lighting systems (e.g., motion sensors, smart bulbs like Philips Hue) that turn off when not needed.
- Smart thermostats (e.g., Nest, Ecobee) that learn user habits and adjust heating/cooling to save energy.
- Energy monitoring systems that track real-time electricity usage and suggest optimizations.

Low-Power Devices: Reducing Energy Waste

Advances in semiconductor technology have led to ultra-efficient electronics:

- Low-power processors (e.g., ARM Cortex-M for IoT) that extend battery life in smart sensors.
- Energy Star-certified appliances (refrigerators, washing machines) that consume 10–50% less power.
- Solar-powered smart gadgets (e.g., smart blinds, outdoor cameras) that rely on renewable energy.

Green Technology in Smart Homes

1. Energy Storage & Renewable Integration
   - Home battery systems (e.g., Tesla Powerwall) store solar energy for nighttime use.
   - Smart inverters optimize solar panel output, feeding excess power back to the grid.
2. AI-Driven Energy Management
   - AI algorithms predict usage patterns and shift high-power tasks (e.g., EV charging) to off-peak hours.

3. E-Waste Reduction
o Modular smart devices (e.g., Framework Laptop) allow easy upgrades, reducing electronic waste.
o Companies like Apple use recycled materials in products like HomePod.

Smart homes and low-power devices exemplify how green technology can merge sustainability with convenience. By adopting these solutions, households can cut energy bills, reduce reliance on fossil fuels, and contribute to a zero-waste future.

32. Просмотрите текст и ответьте на вопрос: “ How does the Gulf Stream work”

The Gulf Stream's Vital Role in Europe's Climate

The Gulf Stream is a powerful Atlantic Ocean current that transports warm water from the Gulf of Mexico to Northwestern Europe. This "heat conveyor belt" is responsible for Europe's unusually mild climate given its high latitudes, making winters in London warmer than those in Newfoundland at the same latitude.

How the Gulf Stream Works

1. Current Mechanics:
o Begins in the Gulf of Mexico (water heated to 30°C)
o Flows northeast at 2-5 mph (100x Amazon River volume)
o Cools near Greenland, sinks, and returns south (AMOC circulation)
2. Heat Transfer:
o Releases heat equivalent to 1.5 million nuclear power plants
o Raises European temperatures by 5-10°C in winter

Europe's Climate Dependence

Temperature Regulation:
• UK/Ireland: 10°C warmer than same-latitude Canada
• Norway: Coastal ports remain ice-free year-round
• France: Enables wine-growing at 48°N (parallel to Canada's cold Newfoundland)

Precipitation Patterns:
• Brings moisture for Western Europe's rainfall
• Supports agriculture from Ireland to Ukraine

Climate Change Threats

1. AMOC Weakening:
o 15% slowdown since 1950 (IPCC data)
o Melting Greenland ice dilutes salty water, disrupting sinking mechanism
2. Potential Collapse:
o Could lower European temperatures by 3-5°C
o May increase storms and shift rain belts southward

Economic and Ecological Impacts

1. Agriculture:
o UK growing seasons could shorten by 30 days
o Mediterranean drought intensification
2. Energy:
o Increased winter heating demands
o Reduced hydropower in Scandinavia
3. Ecosystems:
o North Sea fisheries disruption
o Boreal forest migration

Monitoring and Solutions

33. Просмотрите текст и ответьте на вопрос: “What is the history of the Union Jack“

The flag of the UK is known as the Union Jack. It has its history. It all began in 1603 when Scotland was joined to England and Wales. The flag is made up of 3 crosses. The upright cross is the Cross of St. Jeorge the patron saint of England. The white diagonal cross is the cross of St. Andrew, the patron saint of Scotland. The red diagonal cross is the cross is the cross of St. Patrick, the patron saint of Ireland. All of them are on the blue background. The national anthem is . The national currency is pound. Geographically the island of Great Britain is subdivided into 2 main regions: Lowland Britain and Highland Britain. Lowland Britain comprises southern and eastern England.

Highland Britain consists of Scotland, most of Wales, the Pennines (or the Pennine Chain) and the Lake District. The highest mountain top is Ben Nevis in Scotland. The chief rivers of Great Britain are: the Severn, separating England and Wales, the Thames (the longest and the deepest one). The swiftest flowing river is the Spray. Also the Tweed is famous (the woolen fabric is made here). Every country in the UK has its own national emblem. The red rose is the national emblem of England, the thistle is the national emblem of Scotland, the daffodils and the leek are the emblems of Wales, and the shamrock (a kind of clover) is the emblem of Ireland.

34. Просмотрите текст и ответьте на вопрос: “ What are the functions of the monarch in the United Kingdom? “

The United Kingdom is a constitutional monarchy. It has a monarch - a King or a Queen. The present British monarch is Queen Elizabeth the Second. She become Queen in 1952. The monarch has little power and can reign with the support of Parliament. British Parliament is the legislative body at the country. It consists of two Houses. The House of Commons and House of Lords. Parliament and the monarch have different roles in the Government of the country. In reality, the House of Commons has truth power. It introduces new bills. Then they go to the House of Lords for approval. The functions of the Queen are: to open the sessions of the Parliament, to head the commonwealth, to be Commander-in-Chief, to declare the war, to make peace. The house of commons is made up of 650 elected knows of members of parliament. The party which has the majority of suits in the Government and its leader usually becomes prime minister. The prime minister forms his or her Cabinet Ministers. The chairman of the House of Commons is the Speaker. The chairman of the House of Lords is the Lord Chancellor. He sits on a special place, which is called the woolsack. It means that wool made England rich. The members of the House of Lords are not elected, there are live peers. There are several political parties in Great Britain. They are the Conservative, the Liberal, the Labor, the Social Democratic and the Communist parties. Prime minister of the country Boris Johnson is leader of the Conservative Party.

35. Просмотрите текст и ответьте на вопрос: “ What natural resources is the Siberian region rich in?”

Siberia, in the north of Russia, is one of the coldest, harshest places on earth. Famed for its inhospitable climate, it is also mineral-wealthy and unexploited – a true frontier region. Although it has attracted mining companies for decades, the challenging landscape and conditions have meant they have only just begun to scratch the surface of the area’s potential.

This could now be changing; as climate change leads to warmer temperatures, ice and permafrost are melting and potentially easing the mining process. The mining sector is the second biggest contributor to GDP in Russia, and is expected to continue to play an important role in its economy.

Mining in Siberia grew exponentially during the 20th century, as successive governments and leaders sought to take advantage of it. “The Siberian region is rich in minerals including coal, gold, diamond and iron ore,” says Globaldata analyst Alok Shukla. “Coal is largely extracted from Kemerovo, Krasnoyarsk Krai, Sakha (Yakutia), Republic of Khakassia, and Irkutsk Oblast. Gold originates mainly from Krasnoyarsk Krai and Irkutsk Oblast.”

Russia is responsible for 7% of global aluminium production, and 95% of this takes place in Siberia. It is home to Russia’s largest coal mine, the Arshanovsky pit in the Khakassia Republic which opened in 2015. When at full capacity it is expected to produce 10 million tonnes of coal, and there are already plans to expand it further. Siberia and the Far East also hold 84% of Russia’s known gold reserves.

But much remains unexplored or inaccessible in Siberia still, leaving the true mineral wealth of the region uncertain. In 2016, a mineral was discovered in Siberia unlike any ever found naturally occurring on earth. Instead it appears to be similar to lab-grown metal-organic frameworks. Such discoveries highlight the potential of a region so long hidden under ice and thick forests.

36. Просмотрите текст и ответьте на вопрос: “What are the consequences of global warming”

In recent years, climate change has been a much talked about issue, with many debates over its possible impact on the world, and some even going so far as to question its very existence. However, with the undeniable increase in greenhouse emissions on Earth, there can be no doubt that the earth

is becoming warmer.
So what exactly does this mean for the future of our planet? In chilly places like the UK, we may think to ourselves: ‘Finally, warmer weather!’ But global warming will in fact cause extreme weather conditions, meaning that our winters would be even colder than they are now. More than that, warmer temperatures will lead to the melting of ice in the north and south poles, which in turn will lead to rising sea levels across the globe. This is particularly troubling for low coastal regions such as Florida in the USA which would be among the first to be flooded, along with many islands around the world, including the United Kingdom. In 1000 years or so, all these places and more will be submerged underwater.
So where will be able to live? Unless we can find a way to evolve into mermaids and mermen, which doesn’t look promising, the only solution is to move elsewhere. There will be little choice left once a large proportion of the land is lost to the sea, and other remaining places will be so hot that they will be absolutely impossible to survive in. It is possible, then, that the once frozen poles of the Arctic and Antarctica will be suitable enough to live in, having melted its ice and warmed up.
It’s a scary thought to imagine such devastation on Earth. Perhaps if people start to realize how their actions now can have such a profound impact on future generations, they will change their attitude and start to think more about caring for the environment, in order to save it.

37. Просмотрите текст и ответьте на вопрос: “What is the weather like in Wales in autumn and winter?“

Inland Weather in Wales
The higher you get in Wales, the colder and wetter it gets. And as you move away from the coasts, Wales is quilted with river valleys separated by increasingly higher hills. The Brecon Beacons in south Wales, are softly rolling but enormous, windswept hills where winter temperatures below freezing and snowfalls are not uncommon. Further north, in the inland mountains of Snowdonia National Park, heavy precipitation can be extreme. One mountain peak, Crib Goch, may be the wettest place in the entire country with an astonishing 176 inches of rainfall annually.2 And on the highest peaks, it snows a great deal.
Mount Snowdon, at 3,560 feet and the highest U.K. mountain south of Scotland, can experience snowfall from October to May.
Snowfall at lower altitudes is rare, with an average of only 10 days a year with snow lying on the ground in the south and west Wales. On the other hand, the mountains of Snowdonia average 30 days a year with snowfall lying on the ground.
Autumn and Winter in Wales
In September, temperatures linger in the 60s but fall away rapidly through October and November into the high 40s. January and February are the coldest months with temperatures hovering around freezing or slightly above in higher areas and in the high 40s along the coast. Temperatures at night are usually 10 to as much as 15 degrees Fahrenheit colder depending on where you are in the country.
October through January are the wettest months. Rain tends to fall in short, sharp and very heavy showers. November is particularly squally with rain accompanied by gusty winds.

38. Просмотрите текст и ответьте на вопрос: “Why is Scotland is the land of myths and mysteries? “

Scotland is a country in the north of Great Britain. It is a part of the United Kingdom. Scotland is divided into three natural regions: the Southern Uplands, the Central Lowlands and the Highlands and islands. A lot of places in Scotland are a natural paradise, still untouched by man.
The capital of Scotland is Edinburgh, well known for its castle. Glasgow is the industrial capital of Scotland. It is the third largest city in Great Britain. The typical products of Scotland are timber, whisky, salmon. Golf is the Scottish natural sport and it seems to have originated in this country.
Scotland is also the land of myths and mysteries; every castle has its ghost. Glamis Castle is said to have nine of them. And of course everyone knows about the Loch Ness Monster. 'Nessie" is said to be about six meters long, with a long, thin neck. The first report of the monster in Loch Ness was in 565 A.D. Since 1934, thousands of people claimed to they had seen the monster. Scientists have investigated the Loch and taken pictures but no scientific explanation of the mystery has been given.

Scotland is the north part of Great Britain. Five million people live in Scotland. Edinburgh is the capital of Scotland.

39. Просмотрите текст и ответьте на вопрос: “What is the London Eye?“

The London Eye, or the Millennium Wheel, is a cantilevered observation wheel on the South Bank of the River Thames in London. It is Europe's tallest cantilevered observation wheel, and is the most popular paid tourist attraction in the United Kingdom with over 3 million visitors annually. It has made many appearances in popular culture.
The structure is 135 metres (443 ft) tall and the wheel has a diameter of 120 metres (394 ft). When it opened to the public in 2000 it was the world's tallest Ferris wheel. Its height was surpassed by the 167 metres (548 ft) High Roller (Las Vegas) in 2014. Supported by an A-frame on one side only, unlike the taller Nanchang and Singapore wheels, the Eye is described by its operators as "the world's tallest cantilevered observation wheel".
The London Eye used to offer the highest public viewing point in London until it was superseded by the 245-metre-high (804 ft) observation deck on the 72nd floor of The Shard, which opened to the public on 1 February 2013.
In March 2020, the London Eye celebrated its 20th birthday by turning several of its pods into experiences themed around London, in partnership with its sponsor lastminute.com. The special experiences included a pub in a capsule, a west end theatre pod and a garden party with flower arrangements to represent the eight London Royal parks.

40. Просмотрите текст и ответьте на вопрос: "The Global Waste Crisis"

The Global Waste Crisis
Every year, the world generates over 2 billion tons of municipal solid waste, with plastic, electronic waste (e-waste), and food waste being major contributors. Landfills and incineration—traditional waste disposal methods—release harmful greenhouse gases (like methane and CO_2) and toxic chemicals, accelerating climate change and pollution.
Green Technology Solutions for Waste Management
1. Smart Recycling Systems
o AI-powered waste sorting robots (e.g., ZenRobotics) use machine learning to separate recyclables with high precision.
o Blockchain-based tracking ensures transparent recycling processes, reducing illegal dumping.
2. Waste-to-Energy (WtE) Technologies
o Biogas plants convert organic waste into renewable energy.
o Plasma gasification breaks down non-recyclable waste into clean syngas for electricity.
3. Circular Economy & Sustainable Materials
o Companies like TerraCycle upcycle hard-to-recycle waste into new products.
o Biodegradable packaging (e.g., Mushroom-based materials, seaweed plastics) replaces single-use plastics.
4. E-Waste Innovations
o Urban mining extracts precious metals (gold, lithium) from discarded electronics.
o Modular smartphones (e.g., Fairphone) reduce e-waste by enabling easy repairs.
5. Zero-Waste Initiatives
o Cities like San Francisco aim for zero waste through strict recycling/composting laws.
o Edible cutlery and reusable container programs cut down disposable waste.

41. Ответьте на вопрос:

What places of interest are there in London?

42. Ответьте на вопрос:

What can you say about the system of higher education in Russia?

43. Ответьте на вопрос:

Does Russia have a borderline with the USA?

44. Ответьте на вопрос:

What is the longest river in the European part of Russia? What can you say about it?

45. Ответьте на вопрос:

What do you know about climate in England?

46. Ответьте на вопрос:

In what wat have computers changed our life?

47. Ответьте на вопрос:

What do you know about theaters in Moscow?

48. Ответьте на вопрос:

“How do you feel about artificial intelligence like Siri and Alexa?”

49. Ответьте на вопрос:

“How have technological advances affected communication ?”

50. Ответьте на вопрос:

“How have technological advances affected education?”

51. Ответьте на вопрос:

“ What do you think is the biggest advantage of modern technology?”

52. Ответьте на вопрос:

“Is there a tech product you want these days? What is it? How will it make your life better?”

53. Ответьте на вопрос:

“ How has technology impacted our work, studies and career?”

54. Ответьте на вопрос:

“What do you think is the most important breakthrough in history ?”

55. Ответьте на вопрос:

“What industrial applications of electricity do you know ?”

56. Ответьте на вопрос:

“What makes it possible to eliminate air and water pollution?”

57. Ответьте на вопрос:

“What actions are necessary to take to deal successfully with the problem of protecting the environment throughout the world ?”

58. Ответьте на вопрос:

“What interesting facts do you know about the University of Cambridge?”

59. Ответьте на вопрос:

“What sights are there in London ?”

60. Ответьте на вопрос:

“What are you favorite places of interest in Moscow ?”

61. Choose the correct expression:

The detailed study of a site is …

1. site analysis
2. bird analysis
3. cat analysis

62. Complete the sentence using the correct word:_____ is your address?

1. What
2. How
3. That

63. Choose the correct answer: Do you speak Japanese? No, I _____.

1. speaking not
2. speak not
3. don’t

64. Pick up the correct word: a person or company, responsible for the physical construction of a building is _____

1. scientist

2. constructor
3. doctor

65. Answer the question: What do modal verbs show?

1. modality
2. time
3. voice

66. Choose the correct sentence:

1. I am a student.
2. A student I am.
3. A student am I.

67. When was the University of .Geodesy and Cartography founded?

1. 1779
2. 1920
3. 2000

68. Give the correct translation to the sentence: "This issue must be discussed "

1. Эту проблему не надо обсуждать.
2. Эту проблему необходимо обсудить.
3 Эту проблему нельзя обсуждать.

69. Choose the correct translation to the sentence: Students must take exams in January.

1. Студенты должны сдавать экзамены в январе.
2. Студентам не надо сдавать экзамены в январе.
3 Студенты хотят сдавать экзамены в январе

3 семестр, Зачет

Контролируемые ИДК: УК-4.1 УК-4.2 УК-4.3 УК-4.4

Вопросы/Задания:

1. Translate the text

Information Systems Technology: What Is It & How Does it Work?

In the world of technology, many jobs fall into two categories: information systems (IS) and information technology (IT). Since both of these paths provide valuable skills and knowledge about the technology field, it can be difficult to choose one over the other.

Fortunately, a new branch of the tech world is becoming available to students and professionals alike: information systems technology. This all-encompassing degree path offers a balance of IT and IS, which gives graduates an opportunity to familiarize themselves with a wider range of skill sets.

If you’re interested in learning more about the field of information systems technology and are considering becoming an information technologist yourself, continue reading!

What is Information Technology?

The first leg of any computer science project will fall under the category of information technology. This is because IT places a greater emphasis on the creation and development of the software and hardware that information systems utilize.

Basically, IT professionals are trained to keep computer systems up and running. More specifically, the concept of IT can be defined as the study, implementation, support, or management of computer-based information systems. This means that information technology jobs may include any of the following responsibilities:1

Computer support – Technical support includes fixing computer errors, troubleshooting, and helping other members of an organization better understand the technology they’re using. Generally, those within the IT field must have good customer service skills and ample experience in technical support for both hardware and software.

Network systems administration – The next step above IT support is known as network systems administration. This is usually considered a higher-ranking position with increased responsibility. As an administrator, you'll likely oversee a team of IT professionals, and will be in charge of upgrading and maintaining an organization's system of computers, software, and networks.
Programming and software development – Within the IT field, there are also people who program and develop the software these organizations use. Many software developers will work directly with their place of employment to design and implement operating systems and applications to improve day-to-day operations. Software engineers often have ample experience in computer science and are usually fluent in programming languages like JavaScript and Python.
What Are Information Systems?
Next, we have the broader concept of information systems. While IT is all about developing and maintaining computer-based technology, IS is more of an umbrella term. This means that a lot of different systems can fall into the category of IS.

To help you better understand this idea, let's take a look at the actual definition of information systems: Information systems refer to the systems, hardware, networks, and processes designed to collect, filter, store, and exchange digital information2. To that end, information systems can be broken up into five unique components:3

Software – Essentially, software tells a computer or computer system how to work. Computer software can include operating systems like Windows or iOS, as well as applications like internet browsers, file-sharing programs, word processors, and internet security systems.
Hardware – While software tells a system how to work, hardware does the work at hand. To that end, hardware refers to the physical devices that make up an organization's computer networks. This is a crucial component because efficient, dependable hardware is needed to run the programs that IS requires. Hardware includes computers, external hard drives, servers, keyboards, scanners, and more.
Telecommunications – Telecommunications refers to the way data and information are transferred between the hardware within a network. The internet is the most well-known example of a telecommunications system, but smaller-scale examples may be found within an organization.
Databases – Once data is collected by the software, it needs to be stored somewhere. Databases are an important aspect of information systems because they keep the information organized, secure, and accessible.
Human procedures – Finally, we have the human aspect of information systems. To run the software, collect data, and keep programs up and running, you'll need skilled IS professionals like software engineers and data analysts controlling everything behind the screen.
What is Information Systems Technology?
With a deeper understanding of how these two systems work, now is the time to discuss how they can work together.

Information systems technology is essentially the combination of both IT and IS into one diverse field. This unique branch of tech delves into the integral aspects of both IS and IT. More specifically, information systems technology is going to cover both the development of these systems as well as the technology that keeps them in place.

The field of information systems technology also includes the process of managing these systems and the technology they rely on. Everything from basic IT support to high-level network development is going to fall into this overarching category.

4 семестр, Экзамен
Контролируемые ИДК: УК-4.1 УК-4.2 УК-4.3 УК-4.4
Вопросы/Задания:

1. Answer the question

What is an information system (IS)?

2. Answer the question

What are the main components of an information system?

3. Answer the question

How is management information disseminated?

4. Answer the question

What types of information systems are you familiar with?

5. Answer the question

What role do information systems play in business?

6. Answer the question

Where are information systems used?

7. Answer the question

How can organizations protect collected data?

8. Answer the question

What is the difference between data and information?

9. Answer the question

What role do information systems play in organizations?

10. Answer the question

Do modern computing, communication, and data management form an information system or information technology?

11. Answer the question

How would you define information technology (IT)?

12. Answer the question

What IT applications are you familiar with?

13. Answer the question

What role does information technology play in modern organizations?

14. Answer the question

What are the primary objectives of IT?

15. Answer the question

What roles do IT and IS professionals play?

16. Answer the question

What are the fundamental elements of an information system (IS)?

17. Answer the question

Why is cybersecurity important in information technology?

18. Answer the question

What user authentication methods do you know?

19. Answer the question

Where do we encounter information technology in everyday life?

20. Answer the question

Do you use information systems? If so, how?

21. Translate the text

1. Introduction to Information Systems and Information Technology

In today's digital world, Information Systems (IS) and Information Technology (IT) play crucial roles in organizations and everyday life. While these terms are often used interchangeably, they refer to distinct yet interconnected concepts.

What Is an Information System (IS)?

An Information System (IS) is a structured framework designed to collect, process, store, and distribute data to support decision-making, coordination, and control within an organization. It integrates hardware, software, data, people, and processes to transform raw data into meaningful information. Examples include enterprise resource planning (ERP) systems, customer relationship management (CRM) software, and database management systems.

What Is Information Technology (IT)?

Information Technology (IT) refers to the hardware, software, and telecommunications equipment used to manage and process data. Unlike an information system, IT focuses on the technological infrastructure rather than the broader organizational context. IT includes computers, networks, servers, cybersecurity tools, and programming languages that enable data handling and communication.

Key Differences Between IS and IT

While IT forms the backbone of digital operations, IS leverages IT to achieve business goals. The main distinctions are:

- Scope: IT deals with technology itself, while IS encompasses technology, people, and processes.
- Purpose: IT ensures efficient data processing, whereas IS ensures that information supports business strategies.
- Components: IT includes hardware and software, while IS includes IT plus human and procedural elements.

Conclusion

Understanding the difference between Information Systems and Information Technology is essential for businesses, professionals, and users navigating the digital landscape. IT provides the tools, while IS ensures those tools are used effectively to drive organizational success. As technology evolves, the synergy between IS and IT will continue to shape innovation and efficiency across industries.

22. Translate the text

The Main Components of an Information System

An information system (IS) is a complex and structured framework that enables organizations to manage data efficiently, support decision-making, and streamline operations. To function effectively, an IS relies on several key components that work together to process, store, and distribute information. These components include hardware, software, data, people, and processes. Each plays a critical role in ensuring the system's reliability, usability, and security.

1. Hardware

Hardware forms the physical foundation of an information system. It includes all the tangible devices and equipment used to input, process, store, and output data. Examples of hardware components are computers, servers, networking devices (routers, switches), storage systems (hard drives, cloud infrastructure), and peripheral devices (printers, scanners). The performance and capacity of hardware directly impact the speed and efficiency of an IS. For instance, high-performance servers enable faster data processing, while robust network infrastructure ensures seamless communication between systems.

2. Software

Software acts as the brain of an information system, providing the instructions that allow hardware to function. It is divided into two main categories: system software and application software. System software includes operating systems (Windows, Linux, macOS) and database management systems (Oracle, MySQL), which manage hardware operations and data storage. Application software consists of programs designed for specific tasks, such as enterprise resource planning (ERP) systems, customer relationship management (CRM) tools, and productivity suites (Microsoft Office). Without software, hardware would be incapable of performing meaningful tasks, making it an indispensable component of IS.

3. Data

Data is the raw material processed by an information system to generate useful information. It can take various forms, such as text, numbers, images, or multimedia files. Effective data management involves collecting, storing, organizing, and retrieving data efficiently. Databases and data warehouses play a crucial role in structuring data for quick access and analysis. Additionally, data quality and security are vital, as inaccurate or compromised data can lead to poor decision-making and operational risks. Modern IS often incorporate big data analytics and artificial intelligence to extract valuable insights from large datasets.

4. People

People are the most dynamic component of an information system. This category includes everyone who interacts with the IS, from end-users and IT professionals to managers and executives.

End-users input and retrieve data, while IT specialists maintain and troubleshoot the system. Managers rely on IS-generated reports to make strategic decisions. The effectiveness of an IS depends on user competence, training, and adaptability. Human factors such as resistance to change or lack of technical skills can significantly impact system performance, making user education and support essential.

5. Processes

Processes refer to the procedures, policies, and workflows that govern how an information system operates. They define how data is collected, processed, stored, and shared within an organization. Well-designed processes ensure consistency, efficiency, and compliance with industry regulations. Examples include data backup protocols, cybersecurity measures, and approval workflows for financial transactions. Without standardized processes, an IS may become disorganized, leading to errors, inefficiencies, and security vulnerabilities. Continuous improvement methodologies, such as Lean or Six Sigma, are often applied to optimize IS processes over time.

Conclusion

A well-functioning information system integrates hardware, software, data, people, and processes into a cohesive unit. Each component is interdependent, meaning a weakness in one area can compromise the entire system. As technology advances, organizations must continuously update their IS components to maintain competitiveness, security, and operational efficiency. Understanding these core elements helps businesses design, implement, and manage information systems that drive productivity, innovation, and long-term success.

23. Translate the text

The Role of Hardware and Software in Information Systems

At the core of every modern information system lies the fundamental interplay between hardware and software components. These two elements form the technological backbone that enables organizations to process, store, and manage vast amounts of data efficiently. While hardware provides the physical infrastructure, software delivers the intelligence that transforms this infrastructure into a functional system capable of solving complex business problems.

Hardware: The Physical Foundation

The hardware component of an information system encompasses all tangible devices and equipment that facilitate data processing and communication. At the most basic level, this includes end-user devices such as desktop computers, laptops, tablets, and smartphones that serve as access points to the system. More sophisticated hardware includes servers that host applications and store critical data, often arranged in data centers with redundant power supplies and cooling systems to ensure continuous operation.

Network infrastructure represents another crucial hardware element, comprising routers, switches, firewalls, and cabling that enable communication between different components of the information system. Storage devices have evolved significantly, moving from traditional hard disk drives to faster solid-state drives and scalable cloud storage solutions. Specialized hardware like barcode scanners, point-of-sale terminals, and industrial sensors demonstrate how information systems extend beyond conventional office environments into manufacturing, retail, and logistics operations.

The selection and configuration of hardware components significantly impact system performance. Factors such as processing power, memory capacity, network bandwidth, and storage speed must be carefully balanced against cost considerations. Modern trends like edge computing are pushing hardware capabilities further by enabling data processing closer to its source, reducing latency for time-sensitive applications.

Software: The Cognitive Layer

Software transforms hardware from passive equipment into dynamic, functional systems. System software forms the foundational layer, with operating systems like Windows, Linux, and macOS managing hardware resources and providing common services for application software. Database management systems such as Oracle, SQL Server, and MongoDB handle data storage, retrieval, and security, ensuring information remains organized and accessible.

Application software represents the most visible software component to end-users, encompassing everything from office productivity suites to enterprise-scale solutions like ERP and CRM systems.

Custom-developed applications address specific organizational needs, while commercial off-the-shelf software offers standardized solutions for common business processes. Middleware serves as the connective tissue between different software applications, enabling systems to exchange data seamlessly even when developed by different vendors.

The software landscape continues to evolve with emerging paradigms like cloud-native applications, microservices architecture, and containerization. These innovations allow information systems to become more flexible, scalable, and resilient. Artificial intelligence and machine learning capabilities are increasingly being integrated into business software, enabling advanced analytics, process automation, and predictive capabilities that were previously impossible.

24. Translate the text

The Symbiotic Relationship

At the core of every modern information system lies the fundamental interplay between hardware and software components. These two elements form the technological backbone that enables organizations to process, store, and manage vast amounts of data efficiently. While hardware provides the physical infrastructure, software delivers the intelligence that transforms this infrastructure into a functional system capable of solving complex business problems.

The true power of an information system emerges from the careful integration of hardware and software components. High-performance hardware can be underutilized without properly optimized software, while sophisticated software may perform poorly on inadequate hardware. System architects must consider this interdependence when designing or upgrading information systems, ensuring both elements are appropriately matched to the organization's requirements.

Virtualization technology exemplifies this synergy, allowing software to create multiple virtual machines on a single physical server, dramatically improving hardware utilization. Similarly, software-defined networking applies programming principles to network management, making hardware infrastructure more flexible and responsive to changing business needs. As organizations embrace digital transformation, the boundary between hardware and software continues to blur, with firmware updates and cloud-based services enabling continuous improvement of system capabilities without physical modifications.

This hardware-software ecosystem forms the technological core that supports all other components of an information system - data, processes, and people. Its proper configuration and maintenance are essential for creating reliable, secure, and high-performing systems that can adapt to evolving business requirements and technological advancements. The ongoing innovation in both domains promises to further enhance the capabilities of information systems, opening new possibilities for organizational efficiency and competitive advantage.

25. Translate the text

Understanding Data and Information in the Context of Information Systems

In the realm of information systems, the concepts of data and information form the fundamental building blocks of organizational knowledge. While these terms are often used interchangeably in casual conversation, they represent distinct stages in the transformation of raw facts into meaningful insights. The relationship between data and information mirrors that of ingredients to a finished meal - one serves as the basic material, while the other represents the processed, valuable outcome ready for consumption and decision-making.

Defining Data: The Raw Material

Data consists of discrete, unprocessed facts and figures that represent the elementary observations about events, objects, or transactions. These raw elements exist without context or interpretation, like individual puzzle pieces waiting to be assembled. In digital systems, data typically appears as numbers, text, images, or other binary representations stored in databases or files. A sales transaction record showing "Product A, 150 units, $29.99, 05/15/2023" constitutes data - accurate and specific, but lacking broader meaning until processed.

Modern organizations generate staggering volumes of data from diverse sources including

customer interactions, operational systems, IoT devices, and social media platforms. This data deluge presents both opportunities and challenges, as raw data alone cannot guide business decisions. The quality of data significantly impacts its potential usefulness, with characteristics like accuracy, completeness, consistency, and timeliness determining whether data can be effectively transformed into valuable information. Data management practices have consequently become critical organizational competencies in the digital age.

Information: Data with Purpose and Context

Information emerges when data undergoes processing, organization, and interpretation that makes it meaningful for specific purposes. It represents data that has been filtered, structured, and presented in a way that informs understanding and supports decision-making. Continuing our sales example, when we analyze that raw transaction data to reveal "Product A sales increased 25% month-over-month in the Northeast region," we've created information. This processed knowledge now carries business significance that managers can act upon.

The transformation from data to information typically involves several key processes: contextualization (framing the data within a specific situation), categorization (grouping related data elements), calculation (performing mathematical operations), correction (removing errors and inconsistencies), and condensation (summarizing detailed data). Information systems facilitate these transformations through various applications including database queries, analytics tools, and reporting systems. The value of information lies in its relevance, timeliness, and accuracy for the decision at hand - qualities that effective information systems strive to optimize.

Key Distinctions and Their Importance

The differences between data and information extend beyond mere semantics and have practical implications for system design and business operations. Data is typically voluminous and unstructured, while information is concise and organized for specific uses. Data exists as an organizational asset that requires storage and management, whereas information serves as a strategic resource that drives actions and decisions. Technically, data operates at the syntax level (concerned with format and structure), while information operates at the semantics level (concerned with meaning and interpretation).

This distinction becomes particularly crucial when designing or evaluating information systems. Effective systems must not only collect and store data efficiently but also possess the processing capabilities to transform that data into actionable information. Business intelligence platforms, for instance, specialize in converting vast data repositories into dashboards and reports that highlight trends, exceptions, and opportunities. Similarly, data governance policies must address both the technical aspects of data management and the quality requirements for producing reliable information.

In practice, the data-information continuum continues further as information can be combined with experience and expertise to create knowledge, and ultimately wisdom for strategic decision-making. However, the foundational transformation from raw data to meaningful information remains the critical first step that enables organizations to harness the full potential of their information systems. As businesses increasingly compete on their ability to generate and utilize information effectively, understanding this fundamental distinction becomes essential for professionals across all organizational functions.

26. Translate the text

The Human and Procedural Dimensions of Information Systems

While technology forms the visible infrastructure of information systems, the human and procedural components serve as the vital forces that animate these systems and ensure their effective operation. People and processes transform static hardware and software into dynamic organizational tools, bridging the gap between technical capabilities and business objectives. These elements represent the socio-technical aspects of information systems that determine whether technological investments ultimately succeed or fail in real-world implementation.

People: The Human Element of Information Systems

The human component encompasses all individuals who interact with an information system, each playing distinct yet interconnected roles. End-users represent the largest group, including employees

across various departments who input data, generate reports, and utilize system outputs in their daily work. Their competence and engagement with the system directly impact data quality and system effectiveness. IT professionals form another critical group, comprising system administrators who maintain infrastructure, developers who create and modify applications, and support staff who troubleshoot issues. These technical experts ensure the system remains operational, secure, and aligned with evolving business needs.

Management plays a pivotal role as both consumers of system outputs and decision-makers regarding system evolution. Executives rely on information derived from systems to formulate strategy, while middle managers use operational data to monitor performance and allocate resources. Business analysts serve as translators between technical teams and operational staff, ensuring system capabilities align with user requirements. The human factor introduces both opportunities and challenges - while user creativity and adaptability can enhance system utilization, resistance to change, skill gaps, and inconsistent usage patterns can undermine even the most sophisticated systems.

Processes: The Operational Framework

Processes constitute the formalized methods, procedures, and workflows that govern how an information system functions within an organizational context. These structured approaches ensure consistency, efficiency, and compliance in system operations. Data management processes establish protocols for data entry, validation, storage, and retrieval, maintaining information integrity throughout its lifecycle. Approval workflows define how transactions move through various authorization levels, while reporting schedules determine when and how information gets disseminated to decision-makers.

Security processes form a critical subset, encompassing password policies, access control procedures, and incident response plans that protect system integrity. Backup and recovery processes ensure business continuity in case of system failures or data loss. Quality assurance processes monitor system performance and output accuracy, while change management procedures govern how modifications get implemented with minimal disruption. Well-designed processes balance standardization with flexibility, providing enough structure to ensure reliability while allowing adaptation to unique situations.

27. Translate the text

The Interplay Between People and Processes

While technology forms the visible infrastructure of information systems, the human and procedural components serve as the vital forces that animate these systems and ensure their effective operation. People and processes transform static hardware and software into dynamic organizational tools, bridging the gap between technical capabilities and business objectives. These elements represent the socio-technical aspects of information systems that determine whether technological investments ultimately succeed or fail in real-world implementation.

The effectiveness of an information system emerges from the careful alignment between its human and procedural components. Processes must be designed with user capabilities and limitations in mind - overly complex procedures may lead to workarounds that compromise system integrity, while excessively rigid workflows can stifle productivity. Training programs serve as a crucial interface between people and processes, equipping users with both the technical skills to operate systems and the procedural knowledge to follow established protocols.

Organizational culture significantly influences this dynamic, as norms and values shape how consistently processes get followed and how readily users embrace system changes. Continuous improvement methodologies like Lean and Six Sigma often focus on optimizing this people-process interaction, eliminating inefficiencies while enhancing user experience. The rise of user experience (UX) design in enterprise systems reflects growing recognition that system success depends as much on human factors as on technical specifications.

As information systems evolve with emerging technologies like artificial intelligence and automation, the roles of people and processes continue to transform. While some routine tasks become automated, human oversight becomes increasingly important for exception handling, ethical considerations, and strategic decision-making. Similarly, processes must adapt to accommodate new capabilities while maintaining necessary controls. Organizations that successfully nurture this

human-technical symbiosis create information systems that are not only powerful in theory but truly effective in practice.

28. Translate the text

The Foundation and Framework of Information Technology

Information Technology (IT) constitutes the backbone of modern digital infrastructure, encompassing the comprehensive ecosystem of hardware, software, and network resources that enable data processing, storage, and communication. As the operational engine driving organizational efficiency and innovation, IT systems facilitate everything from basic computing tasks to complex enterprise operations. The architecture of contemporary IT infrastructure reflects an intricate interplay between physical components and digital solutions designed to meet evolving business requirements and technological capabilities.

Computational Hardware: The Physical Substrate

At the core of IT infrastructure lies computational hardware - the tangible equipment that processes digital instructions and stores electronic data. This category extends beyond conventional computing devices to include specialized equipment tailored for specific functions. Enterprise-grade servers form the central processing hubs, ranging from tower servers for small businesses to blade server arrays in large data centers. Storage solutions have evolved from direct-attached hard drives to sophisticated network-attached storage (NAS) and storage-area network (SAN) configurations that provide scalable, redundant data repositories.

Peripheral devices bridge the gap between digital systems and physical environments, including input mechanisms like biometric scanners and output devices such as commercial-grade printers. Mobile computing has introduced new hardware paradigms with tablets, smartphones, and wearable devices expanding the boundaries of traditional IT infrastructure. The emergence of edge computing has decentralized processing power, pushing computational capabilities closer to data sources through specialized edge devices and IoT gateways. Hardware virtualization technologies now allow multiple virtual machines to operate on single physical servers, dramatically improving resource utilization and flexibility.

Software Systems: The Operational Intelligence

The software component of IT infrastructure provides the logical framework that transforms inert hardware into functional systems. Operating systems serve as the fundamental platform, with choices ranging from consumer-grade Windows installations to enterprise Linux distributions and cloud-optimized kernels. Virtualization software enables the creation of abstract computing environments, while containerization platforms like Docker provide lightweight, portable application ecosystems.

Database management systems organize and protect critical data assets, with relational databases such as Oracle and SQL Server handling structured data, while NoSQL solutions like MongoDB manage unstructured data types. Middleware solutions facilitate communication between disparate applications, ensuring seamless data exchange across heterogeneous systems. Security software forms a critical protective layer, incorporating firewalls, intrusion detection systems, and endpoint protection platforms that safeguard IT assets from evolving cyber threats.

The software landscape continues to evolve with microservices architectures replacing monolithic applications, and artificial intelligence being embedded into core business applications. Cloud-native applications designed specifically for distributed computing environments represent the current frontier of software development, offering unprecedented scalability and resilience.

29. Translate the text

Network Infrastructure: The Connectivity Framework

Network components create the communication pathways that interconnect IT resources and enable data exchange. Local area network (LAN) equipment including switches, routers, and wireless access points establish the foundational connectivity within organizational premises. Wide area network (WAN) technologies extend this connectivity across geographical distances, with software-defined networking (SDN) providing dynamic control over network traffic flows.

Internet connectivity solutions range from traditional broadband to dedicated leased lines and emerging 5G wireless connections. Network security infrastructure including next-generation firewalls, virtual private network (VPN) concentrators, and unified threat management (UTM) systems protect data in transit. The proliferation of cloud computing has necessitated robust wide-area network optimization solutions to ensure performance for cloud-hosted applications.
Emerging network paradigms like intent-based networking and network function virtualization are transforming traditional approaches to network design and management. The growing importance of latency-sensitive applications has driven investments in content delivery networks and edge computing infrastructure that reduce transmission delays for critical business applications.

Integration and Management: The Control Layer
The complete IT infrastructure requires sophisticated management systems to coordinate its various components. IT service management (ITSM) platforms provide workflow automation for support processes, while infrastructure monitoring tools offer real-time visibility into system performance. Configuration management databases (CMDB) maintain accurate records of IT assets and their relationships, enabling effective change management.
Cloud management platforms have become essential for organizations operating hybrid IT environments, providing unified control over on-premises and cloud-based resources. Automation tools streamline routine maintenance tasks, while orchestration platforms coordinate complex workflows across disparate systems. Artificial intelligence operations (AIOps) solutions are increasingly being deployed to analyze operational data and predict potential system issues before they impact business operations.
The modern IT infrastructure represents a dynamic, interconnected ecosystem that requires careful planning and continuous optimization. As digital transformation initiatives accelerate across industries, organizations must develop IT infrastructures that balance current operational requirements with the flexibility to adopt emerging technologies. The most effective IT infrastructures are those that can seamlessly integrate new technological capabilities while maintaining stability, security, and performance for critical business applications.

30. Translate the text
Cybersecurity
Cybersecurity is a vital and ever-evolving field dedicated to protecting digital information, systems, and networks from unauthorized access, attacks, damage, or theft. As our reliance on technology grows, so does the importance of safeguarding sensitive data and ensuring the integrity, confidentiality, and availability of digital resources. Cyber threats can take many forms, including malware, phishing, ransomware, and hacking attempts, each capable of disrupting personal privacy, business operations, or national security.
In today's interconnected world, cybersecurity encompasses a broad range of practices, technologies, and policies designed to defend against these threats. This includes implementing strong passwords, encryption, firewalls, intrusion detection systems, and regular software updates, as well as fostering awareness and training among users to recognize potential risks. As cybercriminals become more sophisticated, so too must the strategies used to defend against their attacks, making cybersecurity a dynamic and critical discipline.
Understanding the fundamentals of cybersecurity is essential not only for IT professionals but also for individuals and organizations seeking to protect their digital lives. By staying informed about emerging threats and adopting best practices, we can create a safer digital environment and mitigate the potential harm caused by cyber incidents. Ultimately, cybersecurity is about creating trust and resilience in our digital infrastructure, ensuring that technology continues to serve us securely and reliably in an increasingly connected world.

The economic impact of cybersecurity failures has reached staggering proportions, with the World Economic Forum estimating that cybercrime will cost the global economy $10.5 trillion annually by 2025. This financial reality has elevated cybersecurity to a board-level concern, with organizations increasingly viewing robust security postures as competitive differentiators. The cybersecurity insurance market has correspondingly expanded, though insurers now demand rigorous security

controls as prerequisites for coverage.

31. Translate the text

Cybersecurity tools

Cybersecurity tools encompass a broad spectrum of technologies designed to protect computer systems, networks, and data from unauthorized access, cyber threats, and malicious activities. These tools are essential for organizations to maintain the integrity, confidentiality, and availability of their digital assets in an increasingly complex threat landscape. At the core, cybersecurity tools can be categorized into several functional groups, each serving a specific purpose in the defense architecture.

One fundamental category is firewalls, which act as gatekeepers between internal networks and external environments. Firewalls monitor and filter incoming and outgoing network traffic based on predetermined security rules, preventing unauthorized access and potential threats from infiltrating the network. Modern firewalls, known as next-generation firewalls (NGFW), incorporate advanced features such as intrusion prevention systems (IPS), application awareness, and user identity recognition to provide more granular control.

Complementing firewalls are antivirus and anti-malware solutions, which detect, quarantine, and remove malicious software. These tools utilize signature-based detection, heuristics, and behavioral analysis to identify known and unknown threats, safeguarding endpoints like desktops, laptops, and servers. As malware becomes increasingly sophisticated, these tools are often integrated with cloud-based threat intelligence to enhance detection capabilities.

Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS) are critical for real-time monitoring of network traffic and system activities. IDS tools analyze traffic patterns to identify suspicious behavior or known attack signatures, alerting security teams to potential breaches. IPS extend this functionality by actively blocking or mitigating detected threats, thus providing a proactive defense mechanism.

Security Information and Event Management (SIEM) platforms aggregate and analyze security logs from various sources across an organization’s infrastructure. They provide comprehensive visibility into security events, facilitate incident detection, and support compliance reporting. SIEM tools employ advanced analytics and machine learning to identify anomalies and prioritize alerts, enabling security teams to respond swiftly to threats.

Another vital category involves endpoint detection and response (EDR) tools, which focus on securing endpoints such as workstations, mobile devices, and servers. EDR solutions continuously monitor endpoints for signs of malicious activity, provide detailed forensics, and enable rapid response to incidents. They are often integrated with threat intelligence feeds to enhance their detection accuracy.

32. Translate the text

Cybersecurity tools

Vulnerability scanners are automated tools that assess systems and networks for security weaknesses. They identify missing patches, misconfigurations, or known vulnerabilities that could be exploited by attackers. Regular vulnerability scans are part of a proactive defense strategy, allowing organizations to remediate issues before they are exploited.

Identity and Access Management (IAM) tools manage user identities and control access to resources. They ensure that only authorized individuals can access sensitive data and systems, often employing multi-factor authentication (MFA), single sign-on (SSO), and role-based access controls. Proper IAM practices reduce the risk of insider threats and credential compromise.

Encryption tools safeguard data both at rest and in transit. Encryption ensures that even if data is intercepted or accessed unlawfully, it remains unintelligible without the proper decryption keys. Tools like SSL/TLS protocols, disk encryption, and secure file transfer solutions are fundamental to maintaining data confidentiality.

In addition to these, organizations utilize penetration testing tools such as Metasploit, Burp Suite,

and Kali Linux distributions to simulate cyberattacks and identify vulnerabilities from an attacker's perspective. These simulated attacks help organizations understand their security posture and prioritize remediation efforts.

As cyber threats evolve, so do cybersecurity tools. Artificial intelligence (AI) and machine learning-driven solutions are increasingly integrated to enhance threat detection, automate response, and reduce false positives. Cloud security tools are also gaining prominence to protect data and applications hosted in cloud environments, offering features like cloud access security brokers (CASB), cloud workload protection platforms (CWPP), and secure access services.

Overall, a comprehensive cybersecurity strategy relies on a layered defense approach, integrating multiple tools tailored to an organization's specific needs. Continuous updates, monitoring, and staff training are crucial to ensure these tools remain effective against emerging threats. Cybersecurity tools are not static; they evolve alongside the threat landscape, making their proper deployment and management essential for resilient digital defenses.

33. Translate the text

Human-centric threats in information security

Human-centric threats in information security stem from individuals or groups who intentionally or unintentionally compromise the confidentiality, integrity, or availability of data and systems. These threats are particularly dangerous because they exploit human behavior, psychology, and organizational dynamics, making them harder to predict and defend against than purely technical vulnerabilities. Human threats can originate from both external attackers and insiders, each with distinct motivations, methods, and levels of access.

External attackers are individuals or groups outside an organization who attempt to breach its defenses for financial gain, espionage, sabotage, or ideological reasons. Cybercriminals, often organized in sophisticated networks, deploy tactics such as phishing, where fraudulent emails or messages mimic legitimate sources to trick users into revealing passwords or downloading malware. More advanced variants include spear phishing, which targets specific individuals with personalized lures, and whaling, which focuses on high-profile executives. Another common technique is social engineering, where attackers manipulate human psychology—posing as IT support, vendors, or even law enforcement—to extract sensitive information or gain physical access to restricted areas.

Beyond deception, external attackers exploit technical weaknesses through malware, including ransomware that encrypts critical data until a ransom is paid, spyware that silently monitors user activity, and trojans that create backdoors for persistent access. Denial-of-Service (DoS) and Distributed Denial-of-Service (DDoS) attacks overwhelm systems with traffic, rendering them unusable—often employed as a distraction for more invasive breaches. Zero-day exploits take advantage of undisclosed software vulnerabilities before developers can patch them, making them highly effective for targeted attacks. State-sponsored hackers and Advanced Persistent Threats (APTs) operate with significant resources, conducting long-term espionage campaigns against governments, corporations, or critical infrastructure.

Insider threats, however, are often more damaging due to their legitimate access to systems. These can be malicious insiders, such as disgruntled employees, contractors, or business partners who intentionally steal data, sabotage operations, or sell access to external parties. Motivations range from financial gain and revenge to ideological alignment with hacktivist causes. A notable example is the Edward Snowden case, where a trusted insider leaked classified information by exploiting his system privileges. Other insiders may act as spies, recruited by competitors or foreign entities to exfiltrate trade secrets or intellectual property.

Unintentional insider threats are equally dangerous, resulting from negligence, lack of awareness, or human error. Employees might accidentally expose sensitive data by misconfiguring cloud storage, sending emails to the wrong recipients, or falling victim to phishing scams. Poor password hygiene—reusing weak passwords across accounts—enables credential-stuffing attacks. Even well-meaning staff can inadvertently install malware by connecting infected USB drives or downloading unverified software. The BYOD (Bring Your Own Device) trend exacerbates risks, as personal devices with weaker security access corporate networks.

34. Translate the text

Human-centric threats in information security

Human-centric threats in information security stem from individuals or groups who intentionally or unintentionally compromise the confidentiality, integrity, or availability of data and systems. These threats are particularly dangerous because they exploit human behavior, psychology, and organizational dynamics, making them harder to predict and defend against than purely technical vulnerabilities. Human threats can originate from both external attackers and insiders, each with distinct motivations, methods, and levels of access.

Privileged users, such as system administrators and IT staff, pose a unique risk due to their extensive access rights. If compromised (via credential theft or coercion) or acting maliciously, they can bypass security controls, delete audit logs, or create hidden backdoors. Third-party risks also fall under human-centric threats—vendors, suppliers, or outsourcing partners with network access can become weak links if their security practices are lax. The SolarWinds hack (2020) demonstrated how attackers infiltrated a software vendor to distribute malware to thousands of organizations, including government agencies.

Emerging threats include AI-driven social engineering, where deepfake audio or video impersonates executives to authorize fraudulent transactions, and insider recruitment via dark web forums, where employees are bribed or blackmailed into aiding cybercriminals. Psychological manipulation tactics, such as pretexting (fabricating scenarios to extract information) or quid pro quo attacks (offering fake benefits in exchange for access), continue to evolve.

Mitigating human-centric threats requires a multi-layered approach: security awareness training to recognize phishing and social engineering, strict access controls (least privilege principle), behavioral monitoring to detect anomalous activity, and robust incident response plans to contain breaches. Cultivating a security-conscious organizational culture reduces negligence, while whistleblower programs can deter malicious insiders. Ultimately, since humans are both the weakest link and the first line of defense, balancing trust with vigilance is critical in cybersecurity strategy.

35. Translate the text

Human-Centric Threats and Mitigation Measures in Information Security

Human-centric threats remain one of the most significant challenges in cybersecurity, as they exploit human behavior rather than just technical vulnerabilities. These threats can originate from both malicious insiders and well-meaning employees who inadvertently compromise security. Attackers often manipulate human psychology through social engineering, while insiders may abuse their access privileges for personal gain or sabotage. Mitigating these risks requires a combination of technical controls, employee training, and organizational policies designed to foster a security-aware culture.

One of the most prevalent human-centric threats is social engineering, where attackers deceive individuals into divulging sensitive information or performing actions that compromise security. Phishing, a common form of social engineering, involves fraudulent emails or messages that mimic legitimate sources to trick users into clicking malicious links or sharing credentials. More sophisticated variants, such as spear phishing and business email compromise (BEC), target specific individuals or executives to steal financial data or authorize fraudulent transactions. Beyond digital tactics, attackers may use pretexting, where they fabricate scenarios to gain trust, or quid pro quo attacks, offering fake benefits in exchange for access.

Another critical threat comes from malicious insiders, including disgruntled employees, contractors, or third-party vendors who intentionally misuse their access. These individuals may steal intellectual property, sabotage systems, or sell confidential data to competitors or cybercriminals. High-profile cases, such as Edward Snowden's leak of classified documents, demonstrate how trusted personnel with elevated privileges can cause extensive damage. Even more concerning are recruited insiders, where external actors coerce or bribe employees into aiding their attacks.

Unintentional insider threats, though not malicious, are equally dangerous. Employees may accidentally expose sensitive data by misconfiguring cloud storage, sending emails to the wrong recipients, or falling for phishing scams. Poor password hygiene, such as reusing weak credentials

across multiple accounts, increases the risk of credential-stuffing attacks. Additionally, the rise of bring-your-own-device (BYOD) policies introduces security risks when personal devices with inadequate protections access corporate networks.

36. Translate the text

Human-Centric Threats and Mitigation Measures in Information Security

Human-centric threats remain one of the most significant challenges in cybersecurity, as they exploit human behavior rather than just technical vulnerabilities. These threats can originate from both malicious insiders and well-meaning employees who inadvertently compromise security. Attackers often manipulate human psychology through social engineering, while insiders may abuse their access privileges for personal gain or sabotage. Mitigating these risks requires a combination of technical controls, employee training, and organizational policies designed to foster a security-aware culture.

To mitigate human-centric threats, organizations must implement a multi-layered security strategy that combines technology, training, and policy enforcement. Security awareness training is essential to educate employees about phishing, social engineering, and safe data handling practices. Regular simulated phishing exercises can help reinforce these lessons and identify vulnerable individuals. Strict access controls, following the principle of least privilege, limit employees' access to only the resources necessary for their roles, reducing the potential damage from insider threats. Multi-factor authentication (MFA) adds an extra layer of security, making it harder for attackers to exploit stolen credentials.

Technical measures such as user behavior analytics (UBA) and data loss prevention (DLP) tools can detect unusual activity, such as unauthorized data transfers or login attempts from unusual locations. Encryption ensures that even if data is intercepted or accidentally exposed, it remains unreadable without proper decryption keys. For high-risk environments, privileged access management (PAM) solutions enforce strict controls over administrative accounts, monitoring and logging all privileged activities.

Organizational policies play a crucial role in mitigating human risks. Clear acceptable use policies define proper handling of sensitive data and consequences for violations. Whistleblower programs encourage employees to report suspicious behavior without fear of retaliation. Additionally, fostering a culture of security awareness, where employees feel responsible for protecting company assets, can significantly reduce unintentional breaches.

In conclusion, while human-centric threats are inevitable, they can be effectively managed through a combination of education, technology, and proactive policies. By addressing both intentional and accidental risks, organizations can strengthen their defenses and minimize the impact of human vulnerabilities on their cybersecurity posture. Continuous improvement and adaptation to emerging threats will ensure long-term resilience against these ever-evolving challenges.

37. Translate the text

The Growing Threat of Social Engineering in Cybersecurity

Social engineering represents one of the most pervasive and dangerous threats in information security today. Unlike technical attacks that exploit software vulnerabilities, social engineering manipulates human psychology to bypass security measures. These attacks prey on natural human tendencies such as trust, curiosity, fear, and the desire to be helpful, making them remarkably effective. Cybercriminals have refined social engineering into a sophisticated art, employing various psychological tactics to deceive individuals and organizations into revealing sensitive information, transferring money, or granting access to secure systems.

One of the most common forms of social engineering is phishing, where attackers impersonate legitimate entities through emails, text messages, or fake websites. These communications often create a sense of urgency, such as fake password expiration notices or fraudulent account alerts, pressuring victims to act quickly without scrutiny. More targeted variants, like spear phishing, involve personalized messages tailored to specific individuals or organizations, increasing their credibility. For example, an attacker might research a company's executives and craft an email that appears to come from the CEO, instructing an employee to wire funds for a fake business deal.

Another sophisticated technique is business email compromise (BEC), where attackers impersonate high-level executives or trusted vendors to trick employees into authorizing fraudulent financial transactions. These scams often involve careful reconnaissance, with attackers studying organizational structures, communication styles, and financial processes to make their requests seem legitimate. According to the FBI, BEC scams have caused billions in losses globally, demonstrating their devastating impact.

Beyond digital communication, social engineers use pretexting, where they create fabricated scenarios to establish trust and extract information. A classic example involves an attacker posing as an IT support technician, calling an employee and claiming to need their login credentials to resolve a supposed system issue. The attacker builds credibility by referencing real company details, making the request seem plausible. Similarly, quid pro quo attacks promise a benefit in exchange for information, such as offering free software or gift cards in return for login details.

Baiting is another effective social engineering tactic, leveraging human curiosity to spread malware. Attackers might leave infected USB drives in public places, labeled with enticing names like "Employee Salaries" or "Confidential," hoping someone will plug them into a work computer. Once inserted, the malware installs itself, giving attackers remote access to the network. This method exploits the natural human tendency to investigate unknown but seemingly important items.

Tailgating and physical infiltration demonstrate how social engineering extends beyond digital means. Attackers may follow employees into secure buildings by posing as delivery personnel or maintenance workers, gaining physical access to sensitive areas. Once inside, they can install malicious devices, steal documents, or compromise networked systems directly.

38. Translate the text

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The rise of deepfake technology has introduced a new dimension to social engineering, enabling attackers to create convincing audio or video impersonations of executives or public figures. For instance, a deepfake voice recording of a CEO could be used to authorize fraudulent transactions, while manipulated videos might spread disinformation or damage reputations. These advanced techniques blur the line between reality and deception, making detection even more challenging.

Mitigating social engineering threats requires a multi-faceted approach combining education, technology, and organizational policies. Security awareness training is critical to help employees recognize and resist manipulation tactics. Regular simulated phishing exercises can reinforce good habits and identify vulnerable individuals. Multi-factor authentication (MFA) adds an extra layer of protection, reducing the risk of compromised credentials. Email filtering and verification tools can detect and block phishing attempts before they reach users.

Organizations should also implement strict verification protocols for sensitive requests, such as financial transactions or password changes. For example, requiring verbal confirmation via a known phone number for wire transfers can prevent BEC scams. Physical security measures, like access badges and visitor logs, help deter tailgating attempts. Encouraging a culture of skepticism, where employees feel empowered to question unusual requests, can further reduce the success rate of social engineering attacks.

In conclusion, social engineering remains a formidable threat because it exploits fundamental aspects of human behavior. As attackers continue to refine their tactics, organizations must stay vigilant, combining continuous education with robust technical and procedural defenses. By fostering a security-conscious mindset at all levels, businesses can significantly reduce their vulnerability to these manipulative and ever-evolving attacks.

39. Translate the text

The Double-Edged Sword of Internet of Things (IoT) Devices: Advantages and Security Risks

The rapid proliferation of Internet of Things (IoT) devices has fundamentally transformed how we interact with technology, creating a hyper-connected world where everyday objects—from refrigerators to factory equipment—can collect, analyze, and exchange data. While these smart devices offer remarkable benefits in efficiency, convenience, and automation, they simultaneously introduce significant security vulnerabilities that malicious actors are increasingly exploiting. This paradox of progress versus protection defines the current IoT landscape, requiring careful consideration by both consumers and enterprises adopting these technologies.

The Advantages of IoT Devices

IoT technology has revolutionized numerous industries by enabling unprecedented levels of connectivity and data-driven decision making. In healthcare, wearable devices and remote monitoring systems allow physicians to track patients' vital signs in real time, enabling early intervention for potential health issues. Smart pills with embedded sensors can transmit medication adherence data, while connected insulin pumps automatically adjust dosages based on glucose monitoring. These advancements not only improve patient outcomes but also reduce healthcare costs by minimizing hospital readmissions.

The industrial sector has undergone its own transformation through Industrial IoT (IIoT) applications. Smart sensors on manufacturing equipment predict maintenance needs before failures occur, preventing costly downtime. Supply chain management benefits from RFID tags and GPS trackers that provide end-to-end visibility of goods in transit. Energy companies deploy smart grids that dynamically adjust power distribution based on real-time demand, reducing waste and improving sustainability. These operational efficiencies translate into significant economic advantages, with some estimates suggesting IIoT could add trillions to global GDP in the coming decade.

Consumer environments have seen perhaps the most visible IoT adoption. Smart home systems integrate lighting, climate control, security cameras, and appliances into unified networks controllable via smartphone. Voice assistants like Amazon Alexa and Google Home centralize these interactions through natural language processing. Beyond convenience, these systems offer tangible safety benefits—smart smoke detectors can alert homeowners to fires even when they're away, while water leak sensors prevent catastrophic property damage. Even cities are becoming smarter through IoT-enabled infrastructure like adaptive traffic lights that reduce congestion and air quality monitors that guide urban planning decisions.

The Dark Side: IoT Security Threats

However, this explosion of connected devices has created a sprawling attack surface that cybersecurity measures struggle to protect. Many IoT products prioritize functionality and cost over security, resulting in fundamental vulnerabilities. Weak authentication mechanisms plague the industry, with countless devices shipping with default credentials like "admin/admin" that users never change. The Mirai botnet attack famously exploited this flaw, compromising hundreds of thousands of IoT devices to launch devastating DDoS attacks that temporarily crippled major internet platforms.

The lack of standardized security protocols across IoT manufacturers exacerbates these risks. Unlike computers and smartphones that receive regular security updates, many IoT devices run on proprietary firmware that manufacturers rarely patch. A smart TV or connected thermostat purchased today might contain vulnerabilities that remain unaddressed throughout its entire lifespan. This problem becomes particularly dangerous in industrial settings where IoT devices may have operational lifespans measured in decades, far outpacing the manufacturer's support timeline.

Data privacy concerns represent another critical issue. IoT devices constantly collect sensitive information—from home security cameras recording private spaces to health monitors tracking intimate biometrics. Often this data transmits to cloud servers with inadequate encryption, vulnerable to interception. Even when encrypted, questionable data handling practices by manufacturers can expose personal information. Several cases have emerged of hackers accessing baby monitors or home security systems, highlighting the personal safety implications of compromised IoT devices.

More sophisticated threats target the interconnectivity of IoT ecosystems. Attackers frequently use vulnerable IoT devices as entry points to infiltrate broader networks. A compromised smart light bulb might seem harmless, but if it shares a network with corporate systems, it can serve as a beachhead for lateral movement. This risk becomes especially acute in enterprise environments where operational technology (OT) networks—previously air-gapped from IT systems—now connect to the internet through IoT devices, exposing critical infrastructure to potential cyber-physical attacks.

40. Translate the text

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Emerging Threat Vectors

As IoT technology evolves, so do the attack methods. AI-powered attacks represent a growing concern, where machine learning algorithms automatically identify and exploit vulnerabilities across thousands of devices. The rise of 5G networks, while enabling faster IoT communication, also allows attacks to propagate more rapidly across connected devices. Edge computing—where data processing occurs closer to the source—reduces latency but creates new attack surfaces at the network periphery.

Perhaps most alarmingly, supply chain compromises threaten IoT security at the manufacturing level. Recent revelations about compromised hardware components demonstrate how vulnerabilities can be baked into devices before they even reach consumers. Nation-state actors have shown particular interest in these tactics, potentially creating backdoors in critical infrastructure components that could be activated during geopolitical conflicts.

Balancing Benefits and Risks

Addressing these challenges requires a multi-stakeholder approach. Manufacturers must adopt security-by-design principles, building devices with hardware-based security modules, secure boot processes, and automatic update mechanisms. Governments are increasingly implementing IoT security regulations, like the UK's Product Security and Telecommunications Infrastructure Act, which mandates basic security standards for connected devices.

On the organizational level, network segmentation can isolate IoT devices from critical systems, while continuous monitoring solutions detect anomalous behavior. Consumers should practice basic cyber hygiene—changing default passwords, regularly updating firmware, and carefully reviewing device permissions. Perhaps most importantly, the industry needs to shift its mindset from viewing security as an added cost to recognizing it as a fundamental requirement for sustainable IoT adoption.

The future of IoT promises even greater integration into our lives, with smart cities, autonomous vehicles, and advanced healthcare monitoring on the horizon. Realizing this potential without catastrophic security consequences will demand ongoing vigilance, innovation in protective technologies, and collaboration across sectors. As we stand at this technological crossroads, the decisions made today about IoT security will determine whether these devices become trusted facilitators of progress or persistent vulnerabilities in our increasingly digital world. The choice between these outcomes remains ours to make through informed design, responsible deployment, and conscientious usage of these transformative technologies.

41. Look through the text and tell about The Transformative Impact of Information Technology and Information Systems on Automation

The Transformative Impact of Information Technology and Information Systems on Automation

The integration of Information Technology (IT) and Information Systems (IS) into modern business

processes has fundamentally reshaped the landscape of automation, driving unprecedented efficiency, accuracy, and scalability across industries. From manufacturing floors to financial services, healthcare, and beyond, the synergy between IT infrastructure and IS frameworks has enabled organizations to automate complex tasks that were once exclusively manual. This transformation is not merely about replacing human labor with machines but about creating intelligent systems that enhance productivity, reduce errors, and unlock new possibilities for innovation.

At the core of this revolution lies the ability of IT to provide the hardware and software necessary for automation, while IS offers the structured methodologies to collect, process, and analyze data that fuels automated decision-making. Modern automation relies heavily on advancements such as cloud computing, which provides scalable resources for deploying automated workflows without the need for extensive physical infrastructure. Edge computing further enhances automation by enabling real-time data processing at the source, critical for applications like autonomous vehicles and industrial IoT (Internet of Things) systems where latency must be minimized.

Information Systems play a pivotal role in designing and managing automated processes. Enterprise Resource Planning (ERP) systems, for example, automate inventory management, procurement, and human resources tasks by integrating data across departments into a unified platform. These systems reduce manual intervention, minimize discrepancies, and ensure that business operations run smoothly. Similarly, Customer Relationship Management (CRM) systems automate marketing campaigns, sales tracking, and customer support, allowing businesses to personalize interactions at scale. The data-driven nature of these systems means they can adapt dynamically to changing conditions, such as adjusting supply chain orders based on real-time sales data or rerouting customer service inquiries based on urgency and complexity.

One of the most significant impacts of IT and IS on automation is seen in the rise of robotic process automation (RPA). RPA tools use software bots to mimic repetitive human tasks, such as data entry, invoice processing, or report generation, with greater speed and accuracy. When integrated with AI and machine learning, these bots evolve from performing rule-based tasks to handling unstructured data, making decisions, and even learning from past actions. For instance, in the banking sector, RPA combined with AI can automate loan approval processes by analyzing credit scores, transaction histories, and risk factors without human intervention. This not only accelerates service delivery but also reduces biases and errors inherent in manual reviews.

The manufacturing industry has been transformed by IT and IS through the advent of smart factories, where Cyber-Physical Systems (CPS) and Industrial IoT (IIoT) devices communicate seamlessly to automate production lines. Sensors embedded in machinery collect performance data, which IS analyze to predict maintenance needs, optimize energy usage, and prevent downtime. These systems enable just-in-time manufacturing, where production schedules are automatically adjusted based on real-time demand signals, significantly reducing waste and improving resource allocation.

42. Look through the text and tell abou he Transformative Impact of Information Technology and Information Systems on Automation

In healthcare

The Transformative Impact of Information Technology and Information Systems on Automation

In healthcare, automation powered by IT and IS is saving lives and improving patient outcomes. Electronic Health Records (EHR) systems automate patient data management, ensuring that medical histories, test results, and treatment plans are instantly accessible to authorized personnel. AI-driven diagnostic tools analyze medical images or genetic data to detect anomalies faster and with higher precision than human practitioners. Automated alert systems in hospitals monitor patients' vital signs and notify staff of critical changes, enabling timely interventions. These advancements not only enhance care quality but also alleviate the burden on healthcare professionals, allowing them to focus on complex decision-making rather than administrative tasks.

The financial sector has embraced automation to enhance security, compliance, and customer service. Fraud detection systems powered by machine learning analyze transaction patterns in real time to identify and block suspicious activities. Regulatory technology (RegTech) automates compliance reporting by continuously monitoring transactions against legal frameworks, reducing

the risk of human error and non-compliance penalties. Chatbots and virtual assistants, underpinned by natural language processing (NLP), handle routine customer inquiries, account management, and even financial advice, providing 24/7 service without human fatigue.

However, the impact of IT and IS on automation is not without challenges. The displacement of jobs due to automation remains a contentious issue, necessitating workforce reskilling initiatives to prepare employees for higher-value roles that machines cannot easily replicate. Cybersecurity risks escalate as automated systems become more interconnected, requiring robust IS frameworks to protect sensitive data and ensure system integrity. Ethical considerations, particularly in AI-driven automation, demand transparency and accountability to prevent biases in decision-making algorithms.

Looking ahead, the convergence of IT and IS with emerging technologies like quantum computing and 5G networks promises to unlock new frontiers in automation. Quantum algorithms could optimize logistics networks in ways currently impossible for classical computers, while 5G's ultra-low latency will enable more responsive and reliable autonomous systems. The continued evolution of IS will focus on enhancing interoperability between disparate automated systems, ensuring seamless data flow across platforms, industries, and geographies.

Ultimately, the impact of IT and IS on automation represents a paradigm shift in how work is performed, measured, and improved. Organizations that strategically leverage these technologies are achieving not only operational excellence but also newfound agility to innovate and adapt in rapidly changing markets. The future of automation lies in intelligent systems where IT provides the tools, and IS provides the wisdom—transforming data into actionable insights that drive continuous improvement and sustainable growth. As this synergy deepens, the boundary between human and machine capabilities will blur, creating a collaborative ecosystem where each complements the other to achieve what neither could accomplish alone.

43. Look through the text and tell about IT and IS impact on data management

IT and IS impact on data management

Information Technology (IT) and Information Systems (IS) have profoundly transformed the landscape of data management, revolutionizing how organizations collect, store, process, analyze, and utilize data. Their impact is multifaceted, influencing the efficiency, accuracy, security, and accessibility of data across various sectors.

At the core, IT encompasses the hardware, software, networks, and infrastructure that facilitate data handling, while IS refers to the organized integration of these technological components with people and processes to support decision-making and operations. Together, they create an interconnected environment where data flows seamlessly, enabling real-time insights and strategic actions.

One significant impact of IT and IS on data management is the shift from manual, paper-based systems to automated digital processes. This transition has dramatically increased the volume of data that organizations can handle, often referred to as "big data." Advanced storage solutions, such as cloud computing and data warehouses, allow for scalable and cost-effective data storage, ensuring that vast amounts of information are readily available for analysis. Moreover, IT-driven data integration tools enable organizations to aggregate data from multiple sources—be it transactional systems, social media, sensors, or external databases—creating a comprehensive view that supports more informed decision-making.

The advent of sophisticated data processing technologies, including artificial intelligence (AI) and machine learning, has further enhanced data management capabilities. These tools facilitate the cleaning, transformation, and analysis of large datasets, uncovering patterns and insights that would be impossible to detect manually. Consequently, organizations can perform predictive analytics, optimize operations, and personalize customer experiences, all driven by efficient data management systems powered by IT and IS.

Security and privacy are also significantly influenced by technological advancements. Encryption, access controls, intrusion detection systems, and compliance monitoring are now integral to data management frameworks, safeguarding sensitive information against breaches and unauthorized access. The deployment of these security measures within IS ensures that data integrity and confidentiality are maintained, which is essential in regulated industries such as finance, healthcare, and government.

Furthermore, IT and IS have democratized data access within organizations. Cloud-based platforms

and user-friendly dashboards allow employees at various levels to access relevant data without specialized technical skills, fostering a data-driven culture. This democratization accelerates decision-making processes and promotes transparency.

However, these technological advancements also introduce new challenges. The exponential growth of data necessitates robust data governance policies to ensure quality, consistency, and compliance with legal standards. Managing data privacy concerns, especially with regulations like GDPR and CCPA, requires continuous oversight and adaptation of data management practices. Additionally, reliance on complex IT systems makes organizations vulnerable to cyber threats and system failures, emphasizing the importance of resilient infrastructure and proactive security measures.

In essence, IT and IS have transformed data management from a manual, siloed activity into a dynamic, integrated, and strategic function. They have enabled organizations to harness the power of data for competitive advantage, operational efficiency, and innovation. As technology continues to evolve, so will the capabilities and complexities of data management, demanding ongoing adaptation and strategic oversight to maximize benefits while mitigating risks.

44. Look through the text and tell about IT and IS impact on company competitive advantages

IT and IS impact on company competitive advantages

Information Technology (IT) and Information Systems (IS) have become fundamental drivers of competitive advantage in today's dynamic business environment. Their impact extends across various facets of organizational operations, enabling firms to innovate, optimize processes, and enhance customer value, thereby differentiating themselves from competitors.

Primarily, IT and IS facilitate operational efficiency by automating routine tasks and streamlining workflows. Automation reduces costs, minimizes errors, and accelerates decision-making processes, which collectively contribute to a more agile and responsive organization. For instance, enterprise resource planning (ERP) systems integrate core business processes, providing real-time data that support swift and informed decisions, thus enhancing operational agility. This efficiency allows companies to deliver products and services faster, at lower costs, and with higher quality—key factors in gaining a competitive edge.

Furthermore, IT and IS underpin innovation by enabling the development of new products, services, and business models. Digital platforms, data analytics, and cloud computing open avenues for creating customized offerings tailored to specific customer needs. For example, data analytics can reveal consumer preferences and emerging market trends, guiding product development and marketing strategies. Companies leveraging these technologies can enter new markets more rapidly and adapt quickly to changing customer demands, maintaining a competitive advantage through continuous innovation.

Customer relationship management (CRM) systems exemplify how IT and IS enhance customer engagement and loyalty. By capturing detailed customer data and providing personalized experiences, organizations can foster deeper relationships, increase retention, and differentiate their brand. This customer-centric approach, powered by sophisticated information systems, creates a competitive barrier by making it more challenging for competitors to replicate personalized service at scale.

Additionally, IT and IS support strategic decision-making through advanced analytics, business intelligence, and data-driven insights. By harnessing vast amounts of data, companies can anticipate market shifts, optimize supply chains, and identify new revenue streams. Strategic agility—enabled by timely and relevant information—becomes a critical advantage in volatile markets, allowing firms to adapt their strategies proactively and outmaneuver competitors.

In the realm of supply chain management, IT systems facilitate transparency, coordination, and responsiveness. Technologies such as RFID, GPS tracking, and integrated supply chain platforms enable real-time monitoring and collaboration across suppliers, manufacturers, and distributors. This interconnectedness reduces lead times, lowers inventory costs, and improves service levels, positioning the company as a reliable and efficient partner—a significant competitive advantage.

Moreover, the advent of digital transformation has reshaped competitive landscapes by lowering entry barriers and enabling smaller, more agile firms to challenge established players. Cloud computing, for example, reduces infrastructure costs, allowing startups and small companies to access sophisticated systems and compete on a more level playing field. This democratization of

technology fosters innovation and intensifies competition, compelling firms to continually invest in IT and IS to sustain their advantages.
However, the deployment of IT and IS also presents challenges, including high implementation costs, cybersecurity risks, and rapid technological obsolescence. Companies must develop robust IT strategies and invest in security measures to protect their information assets, ensuring that their competitive advantages are not compromised.
In conclusion, IT and IS profoundly influence a company's ability to achieve and sustain competitive advantage. They drive operational excellence, foster innovation, enhance customer relationships, and enable strategic agility. As technology continues to evolve, organizations that effectively leverage these systems will be better positioned to adapt to market changes, differentiate themselves from competitors, and secure long-term success in an increasingly digital world.

45. Look through the text and tell about IT and IS general impact on business

IT and IS general impact on business
Information Technology (IT) and Information Systems (IS) have fundamentally transformed the landscape of modern businesses, influencing how organizations operate, compete, and innovate. Their impact extends across multiple facets of enterprise functioning, driving efficiency, enabling strategic decision-making, and fostering new business models.
At the core, IT encompasses the hardware, software, networks, and data management tools that facilitate the processing, storage, and dissemination of information. IS, on the other hand, refers to the organized system that collects, processes, stores, and distributes information to support decision-making and coordination within an organization. Together, they create a digital backbone that underpins nearly every aspect of contemporary business operations.
One of the most significant impacts of IT and IS is the enhancement of operational efficiency. Automated processes reduce manual effort, minimize errors, and accelerate workflows. For instance, enterprise resource planning (ERP) systems integrate core business processes such as finance, supply chain, and human resources, allowing for real-time data access and streamlined operations. This integration results in cost savings, faster response times, and improved productivity.
Furthermore, IT and IS have revolutionized communication within and outside organizations. They facilitate instant communication channels through email, instant messaging, video conferencing, and collaborative platforms, breaking down geographical barriers. This connectivity fosters better teamwork, quicker decision-making, and more responsive customer service, which are vital in today's fast-paced markets.
The impact on decision-making is profound. Advanced data analytics, business intelligence tools, and artificial intelligence enable organizations to analyze vast quantities of data, uncover insights, and predict trends. This data-driven approach empowers managers to make informed decisions, optimize resource allocation, and identify new opportunities. For example, customer data analytics can help tailor marketing campaigns, improve customer retention, and develop personalized products.
IT and IS also play a crucial role in enabling innovation and creating new business models. Digital technologies have given rise to e-commerce, digital marketing, and platform-based ecosystems, allowing businesses to reach global markets with minimal physical presence. Companies like Amazon and Alibaba exemplify how digital platforms can disrupt traditional retail, offering consumers unprecedented convenience and choice. Additionally, cloud computing has lowered barriers to entry for startups and small businesses, enabling access to advanced infrastructure without significant capital investment.
The influence of IT and IS extends to competitive advantage. Organizations leveraging cutting-edge technology can differentiate their offerings, improve customer experiences, and respond swiftly to market changes. For example, data analytics can help anticipate customer needs, while automation can enhance service delivery. This technological edge often translates into increased market share and profitability.
However, the integration of IT and IS also introduces challenges. Cybersecurity threats have become more sophisticated, necessitating robust security measures to protect sensitive data and maintain trust. Additionally, rapid technological changes require continuous investment in skills, infrastructure, and innovation, which can be resource-intensive. There are also concerns related to

data privacy, ethical use of AI, and the digital divide, which can impact societal and organizational equity.

In conclusion, IT and IS have a transformative impact on businesses by improving efficiency, enabling better decision-making, fostering innovation, and providing competitive advantages. While they offer substantial benefits, organizations must also navigate associated risks and challenges to fully harness their potential. As technology continues to evolve, businesses that effectively integrate IT and IS into their strategic frameworks will be better positioned to thrive in an increasingly digital world.

46. Look through the text and tell about IT and IS general impact on communication

IT and IS general impact on communication

Information Technology (IT) and Information Systems (IS) have profoundly transformed the landscape of communication across all facets of society, revolutionizing how individuals, organizations, and nations interact and share information. The advent and rapid development of IT and IS have shifted communication from traditional, often linear methods to dynamic, instantaneous, and multidirectional exchanges that transcend geographical and temporal boundaries.

At the core of this transformation is the ability of IT and IS to facilitate real-time communication. The proliferation of the internet, mobile devices, and digital platforms has enabled instant messaging, video conferencing, social media, and email, allowing people to connect across continents effortlessly. This immediacy has not only enhanced personal interactions but has also revolutionized business practices, enabling organizations to coordinate operations, share data, and collaborate on projects seamlessly, regardless of physical location.

Furthermore, IT and IS have democratized access to information, breaking down barriers that previously limited communication to specific groups or regions. The widespread availability of digital platforms means that individuals and communities can voice their opinions, share their stories, and participate in global conversations. This democratization fosters greater inclusion and participation, although it also presents challenges related to information overload, misinformation, and digital divides.

In the realm of organizational communication, the impact of IT and IS is particularly significant. They have streamlined internal communication channels, allowing for more efficient dissemination of policies, updates, and feedback. Enterprise Information Systems integrate various functions—such as human resources, supply chain management, and customer relationship management—enhancing coordination and decision-making. These systems enable organizations to analyze vast amounts of data, leading to more informed strategies and better responsiveness to market changes.

The influence of IT and IS extends beyond organizational boundaries to societal and cultural levels. They have accelerated cultural exchange and global awareness, enabling people to learn about different traditions, perspectives, and issues instantaneously. Social media platforms, in particular, have played a pivotal role in mobilizing social movements, raising awareness, and fostering community building. However, these same platforms have also facilitated the spread of misinformation, cyberbullying, and privacy concerns, illustrating the double-edged nature of technological advancements.

Moreover, IT and IS have impacted the nature of language and communication styles. The rise of digital communication has led to the development of new linguistic phenomena—emojis, abbreviations, memes—that reflect evolving social norms and facilitate nuanced expression within limited character constraints. This evolution influences not only informal communication but also how language is taught, learned, and understood across cultures.

While the benefits are substantial, the reliance on IT and IS also introduces challenges. Issues related to data security, privacy, and ethical considerations are central concerns, as sensitive information becomes more vulnerable to breaches. The digital divide—disparities in access to technology—creates inequalities that can hinder effective communication and participation for marginalized groups. Additionally, the rapid pace of technological change demands continuous adaptation and digital literacy, which can be daunting for some populations.

In sum, IT and IS have fundamentally reshaped communication, making it faster, broader, and more interactive. They have enabled unprecedented levels of connectivity, information sharing, and cultural exchange, fostering a more interconnected world. However, these advancements also require careful management to address the associated risks and ensure that the benefits of technological

progress are broadly accessible and ethically sound. The ongoing evolution of IT and IS will continue to influence communication's future, shaping how societies collaborate, innovate, and understand one another.

47. Look through the text and tell about IT and IS general impact on video calls

IT and IS general impact on video calls

Information Technology (IT) and Information Systems (IS) have profoundly transformed the landscape of video communication, shaping how individuals and organizations connect, collaborate, and share information in real-time. The integration of advanced IT infrastructure and sophisticated IS frameworks has not only enhanced the quality and accessibility of video calls but also revolutionized the very nature of remote interaction.

At the core, IT encompasses the hardware, software, networks, and data management systems that facilitate digital communication. The evolution of high-speed internet, fiber optic networks, and wireless connectivity has dramatically increased the bandwidth available for video calls, enabling high-definition, low-latency interactions that closely mimic in-person conversations. These technological advancements have made it possible for users to participate in seamless video conferences regardless of geographical barriers, fostering global collaboration and breaking down traditional communication limitations.

Information Systems play a pivotal role in managing and supporting the infrastructure that underpins video calling platforms. These systems handle user data, authentication, session management, and security protocols that ensure reliable and secure communication channels. As a result, organizations can deploy enterprise-grade video conferencing solutions with robust encryption and access controls, safeguarding sensitive information and maintaining compliance with privacy regulations. The integration of IS also allows for the incorporation of additional functionalities, such as file sharing, screen sharing, recording, and real-time chat, enriching the overall user experience.

The impact of IT and IS on video calls extends beyond technical improvements. They have democratized communication by making video conferencing accessible to a broader audience. With the proliferation of smartphones, tablets, and affordable computing devices, even individuals in remote or underdeveloped regions can participate in virtual meetings. Cloud computing has further amplified this reach by providing scalable, on-demand resources that support large-scale webinars, virtual events, and remote workforces without significant infrastructure investments.

Moreover, the integration of artificial intelligence (AI) and machine learning within IT and IS ecosystems has introduced intelligent features such as automated transcription, real-time language translation, and background noise suppression. These innovations enhance accessibility and inclusivity, allowing participants with diverse needs to engage effectively. AI-driven analytics also enable organizers to monitor engagement levels, gather feedback, and optimize future meetings.

Security is a critical aspect impacted by IT and IS in video calls. As remote communication becomes ubiquitous, safeguarding against cyber threats such as eavesdropping, data breaches, and unauthorized access is paramount. Advanced encryption standards, multi-factor authentication, and secure network protocols are embedded within IS frameworks to protect user privacy and ensure the integrity of communications.

The COVID-19 pandemic underscored the vital importance of IT and IS in enabling continuity of work, education, and social interaction through video calls. Organizations rapidly adapted by deploying sophisticated platforms supported by resilient IT infrastructure and comprehensive IS management. This shift accelerated digital transformation initiatives, emphasizing the strategic significance of robust IT and IS systems in facilitating remote engagement.

In conclusion, the general impact of IT and IS on video calls is multifaceted, encompassing technical enhancements, increased accessibility, improved security, and innovative features that collectively redefine modern communication. As technology continues to evolve, future developments in IT and IS will likely further enhance the quality, security, and scope of video interactions, cementing their role as indispensable tools in personal and professional spheres.

48. Look through the text and tell about IT and IS general impact on emails

IT and IS general impact on emails

Information Technology (IT) and Information Systems (IS) have profoundly transformed the

landscape of email communication, shaping how individuals and organizations exchange information, collaborate, and conduct business. The advent of IT and IS has revolutionized email from a simple messaging tool into a sophisticated, integral component of modern digital communication.

At their core, IT and IS facilitate the creation, transmission, storage, and management of electronic messages. The technological advancements underlying these fields have led to the development of robust email platforms that support multimedia content, real-time communication, and seamless integration with other digital tools. This evolution has significantly increased the speed and efficiency of communication, enabling messages to be delivered instantly across vast geographical distances, thus shrinking the world in terms of information exchange.

One of the most notable impacts of IT and IS on emails is the enhancement of accessibility. With the proliferation of internet-connected devices such as smartphones, tablets, and laptops, users can access their emails anytime and anywhere, fostering a more dynamic and responsive communication environment. Cloud computing, a key component of modern IS, allows for remote storage and synchronization of email data, ensuring that users have continuous access to their messages without being tied to specific devices or locations.

Security and privacy have also been transformed through IT and IS innovations. Advanced encryption protocols, spam filters, firewalls, and secure login mechanisms protect email communications from unauthorized access, cyber threats, and data breaches. These measures have become essential as emails often contain sensitive or confidential information, and their security directly impacts organizational trust and compliance with regulatory standards.

Moreover, IT and IS have introduced automation and intelligence into email management. Features such as automatic sorting, filtering, and priority setting help users organize their inboxes efficiently. The integration of artificial intelligence (AI) enables intelligent email classification, predictive responses, and even the detection of phishing attempts, thereby reducing human error and enhancing security. These technological features streamline workflows, saving time and increasing productivity.

The impact on organizational processes is equally significant. Email has become a cornerstone of corporate communication, facilitating internal coordination and external outreach. IT systems enable enterprise-wide email management, ensuring consistency, compliance, and archiving capabilities crucial for legal and regulatory purposes. The integration of email with customer relationship management (CRM) systems, project management tools, and other enterprise applications has further amplified its utility, fostering more cohesive and efficient business operations.

However, the reliance on IT and IS for email communication also poses challenges. The proliferation of emails can lead to information overload, reducing individual productivity and increasing stress levels. Cybersecurity threats such as phishing, malware, and spam require ongoing vigilance and technological defenses. Additionally, concerns regarding data privacy and surveillance have prompted discussions about ethical use and regulatory oversight of email data.

In summary, IT and IS have fundamentally reshaped email communication by enhancing its speed, accessibility, security, and integration capabilities. These advancements have supported the evolution of email from a basic messaging tool to a vital component of personal and organizational communication ecosystems. While offering numerous benefits, they also introduce new complexities and challenges that require continuous technological and strategic management to maximize their positive impact.

49. Look through the text and tell about IT and IS general impact on social media

IT and IS general impact on social media

Information Technology (IT) and Information Systems (IS) have profoundly transformed the landscape of social media, reshaping how individuals communicate, organizations engage with audiences, and societies function at large. The integration of IT and IS into social media platforms has led to unprecedented levels of connectivity, information dissemination, and user engagement, fundamentally altering social interactions and business models.

At its core, IT provides the technological infrastructure—hardware, software, networks—that enables the creation, sharing, and management of digital content. IS, on the other hand, encompasses the systems that process and organize this information, facilitating efficient data management,

analysis, and decision-making. Together, they have made social media platforms like Facebook, Twitter, Instagram, TikTok, and LinkedIn possible, each leveraging sophisticated IT and IS to deliver seamless user experiences and advanced functionalities.

One of the most significant impacts of IT and IS on social media is the democratization of content creation and dissemination. Previously, mass communication was predominantly controlled by traditional media outlets, which acted as gatekeepers. Now, anyone with internet access and a device can produce and share content instantly, reaching global audiences. This shift has empowered individuals and grassroots movements, enabling social activism, political mobilization, and cultural exchanges on scales previously unimaginable. Hashtags, viral videos, and online campaigns exemplify how IT and IS facilitate rapid, widespread dissemination of ideas and information.

Furthermore, social media's impact on social relationships is profound. It allows for continuous connectivity, enabling users to maintain personal and professional networks across geographical boundaries. IT tools underpin features such as messaging, video calls, and live streams, which foster real-time interactions. This constant connectivity can strengthen relationships but also introduces challenges like social comparison, cyberbullying, and information overload, which impact mental health and societal well-being.

From a business perspective, IT and IS have revolutionized marketing and customer engagement. Companies utilize data analytics and customer relationship management systems to tailor content, personalize advertisements, and predict consumer behavior. Social media analytics provide real-time feedback, allowing brands to adapt strategies swiftly. Moreover, influencer marketing has become a dominant paradigm, leveraging individuals with large followings to promote products, thus blurring the lines between personal and commercial content.

However, these technological advancements also pose significant challenges. Privacy concerns have escalated as vast amounts of personal data are collected, stored, and analyzed by social media platforms. The misuse or breaches of this data can have severe repercussions for individuals and organizations. Additionally, the proliferation of misinformation and fake news is facilitated by the rapid spread of content enabled by IT infrastructure. Algorithms designed to maximize engagement can inadvertently promote sensational or false information, impacting public opinion and democratic processes.

The societal impact extends further into issues of digital divide and inequality. While IT and IS facilitate access to information and connectivity, disparities in internet access and digital literacy mean that not all populations benefit equally. This gap can exacerbate existing social inequalities, affecting education, employment opportunities, and civic participation.

In conclusion, the interplay of IT and IS has fundamentally transformed social media, fostering unprecedented connectivity and information exchange. While these technologies enable positive developments such as empowerment, innovation, and economic growth, they also introduce complex challenges related to privacy, misinformation, and inequality. As social media continues to evolve, ongoing efforts are required to harness its benefits responsibly while mitigating adverse effects, ensuring that the societal impact of IT and IS remains predominantly positive.

50. Look through the text and tell about IT and IS and digital libraries

IT and IS and digital libraries

The advent of Information Technology (IT) and Information Systems (IS) has profoundly transformed the landscape of digital libraries, revolutionizing how knowledge is stored, accessed, and disseminated. Traditionally, libraries served as physical repositories of books, journals, and other media, with access limited by physical boundaries and operational hours. The integration of IT and IS has shifted this paradigm towards more dynamic, accessible, and user-centric digital environments, fundamentally altering the role and functioning of libraries in the digital age.

One of the most significant impacts of IT on digital libraries is the enhancement of access and retrieval capabilities. Advanced database management systems, search algorithms, and indexing techniques enable users to locate information swiftly and efficiently. Digital libraries leverage metadata standards and semantic search technologies to facilitate precise and contextually relevant results, reducing the time and effort required to find pertinent materials. This democratizes access to knowledge, allowing users across the globe to access resources irrespective of their geographical location, fostering inclusivity and bridging information gaps.

Furthermore, the integration of IS has improved the management and organization of digital

collections. Digital libraries utilize sophisticated content management systems to catalog, preserve, and curate vast amounts of digital content. These systems support version control, digital rights management, and preservation strategies, ensuring the longevity and integrity of digital assets. Automation and workflow management within IS streamline processes such as acquisition, cataloging, and dissemination, increasing operational efficiency and reducing costs.

The impact extends beyond mere access to encompass the enhancement of user interaction and engagement. Digital libraries often incorporate user-friendly interfaces, multimedia content, and personalized services, improving user experience. Features such as recommendation engines, user annotations, and collaborative tools foster a more interactive and participatory environment, encouraging active learning and community engagement.

Moreover, IT and IS enable advanced functionalities like digital preservation and archiving, which are crucial in maintaining the longevity of digital content amid rapid technological changes. They facilitate interoperability among different digital library systems through standardized protocols and data formats, promoting resource sharing and integrated access across institutional boundaries. This interconnectedness supports research collaborations and interdisciplinary studies, expanding the scope and impact of digital libraries.

However, these technological advancements also bring challenges. Issues related to digital rights management, data privacy, cybersecurity, and digital divide need careful consideration. Ensuring equitable access and safeguarding intellectual property rights are ongoing concerns that influence the development and management of digital libraries.

In essence, the influence of IT and IS on digital libraries is transformative, enabling more efficient, accessible, and engaging repositories of knowledge. They serve as catalysts for innovation in information dissemination, supporting lifelong learning, research, and cultural preservation in the digital era. As technology continues to evolve, digital libraries are poised to become even more sophisticated, integrated, and vital to the global information infrastructure.

51. Look through the text and tell how Information Technology (IT) and Information Systems (IS) have transformed the healthcare system

IT and IS and health care system

Information Technology (IT) and Information Systems (IS) have profoundly transformed the healthcare system, revolutionizing how medical services are delivered, managed, and accessed. At their core, IT refers to the hardware, software, networks, and other digital tools used to process and store data, whereas IS encompasses the broader framework that integrates these technologies to support organizational operations, decision-making, and strategic planning within healthcare settings.

In the realm of healthcare, IT encompasses a wide array of digital innovations, including electronic health records (EHRs), telemedicine platforms, health information exchanges, mobile health applications, and wearable devices. These tools facilitate the seamless collection, storage, and sharing of patient information, leading to improved accuracy in diagnoses, personalized treatment plans, and enhanced patient engagement. For instance, EHRs enable healthcare providers to access comprehensive patient histories instantly, reducing redundancy and errors, while telemedicine expands access to care, especially in remote or underserved regions.

Information Systems in healthcare integrate these technological tools into cohesive frameworks that support clinical workflows, administrative functions, and strategic decision-making. Hospital Information Systems (HIS), for example, manage various hospital operations such as patient admissions, billing, laboratory results, and pharmacy management. Clinical Decision Support Systems (CDSS) leverage data analytics and artificial intelligence to assist clinicians in diagnosing and prescribing treatments, thereby enhancing patient safety and care quality. Moreover, IS promotes interoperability among different systems, allowing for efficient data exchange across departments and institutions, which is crucial for coordinated care and public health monitoring.

The integration of IT and IS into healthcare systems has led to numerous benefits. It has improved accuracy and efficiency, reduced paperwork, minimized errors, and accelerated the dissemination of critical health information. Additionally, these technologies enable data-driven insights, supporting research, policy-making, and population health management. For example, big data analytics can identify health trends, predict outbreaks, and inform resource allocation, ultimately leading to better health outcomes.

However, the adoption of IT and IS in healthcare also presents challenges. Data privacy and security concerns are paramount, given the sensitive nature of health information. Ensuring compliance with regulations such as HIPAA in the United States or GDPR in Europe is essential to protect patient confidentiality. Moreover, integrating new technologies into existing workflows can be complex and costly, requiring substantial training and change management.

Digital libraries play a vital role in supporting healthcare professionals by providing access to vast repositories of medical literature, research articles, clinical guidelines, and educational materials. These digital repositories facilitate continuous learning, evidence-based practice, and rapid dissemination of new medical knowledge. They are integral to the ongoing professional development of healthcare workers and contribute to maintaining high standards of care.

In conclusion, IT and IS are fundamental to advancing modern healthcare systems. By fostering efficiency, accuracy, and accessibility, they enable healthcare providers to deliver better patient outcomes. As technology continues to evolve, the integration of innovative solutions like artificial intelligence, machine learning, and blockchain promises to further enhance the capabilities of healthcare systems, ensuring they remain responsive to the dynamic needs of populations worldwide.

52. Look through the text and tell about E-learning platforms and IT and IS

E-learning platforms and IT and IS

E-learning platforms have revolutionized the way knowledge is disseminated and acquired, especially in the fields of Information Technology (IT) and Information Systems (IS). These platforms provide a flexible, accessible, and often cost-effective way for students, professionals, and organizations to stay updated with the latest developments, acquire new skills, and enhance their expertise.

In the context of IT and IS, e-learning platforms offer a diverse range of courses covering programming languages, network security, database management, cloud computing, data analysis, cybersecurity, and enterprise systems. They cater to various learning levels, from beginners to advanced practitioners, ensuring that users can progressively build their competencies. Many platforms incorporate interactive elements such as quizzes, coding exercises, and projects, which facilitate practical understanding and application of theoretical concepts.

Moreover, these platforms often partner with industry experts and academic institutions to ensure the content remains current and relevant to industry standards. This collaboration helps learners gain skills that are directly applicable in the workplace, thus bridging the gap between education and employment. Some popular e-learning platforms in the IT and IS domain include Coursera, edX, Udacity, LinkedIn Learning, and Pluralsight, each offering specialized courses, certifications, and even degree programs.

Digital libraries play an integral role in supporting e-learning initiatives. They serve as extensive repositories of knowledge, providing access to textbooks, research papers, technical manuals, videos, and other educational resources. These digital libraries enable learners to delve deeper into specific topics, conduct research, and reference authoritative sources conveniently from any location. Advanced digital libraries utilize search algorithms, indexing, and categorization to help users find relevant materials efficiently.

The integration of digital libraries with e-learning platforms enhances the learning experience by offering a centralized hub for educational content. This synergy allows for personalized learning paths, where learners can access supplementary materials tailored to their courses or interests. Additionally, digital libraries support lifelong learning by providing ongoing access to updated resources, which is crucial in rapidly evolving fields like IT and IS.

In summary, e-learning platforms combined with comprehensive digital libraries have transformed education in IT and IS. They democratize access to high-quality knowledge, foster continuous professional development, and keep pace with technological advancements, ultimately empowering learners worldwide to thrive in the digital economy.

53. Look through the text and tell aout Streamlining operations and IT and IS

Streamlining operations and IT and IS

Streamlining operations within IT and IS departments is essential for enhancing efficiency, reducing

costs, and improving overall organizational performance. To achieve this, organizations must focus on integrating processes, leveraging automation, and fostering a culture of continuous improvement. First, conducting a comprehensive analysis of existing workflows helps identify redundancies, bottlenecks, and areas prone to errors. This creates a clear understanding of where streamlining efforts should be concentrated. Implementing standardized procedures across the IT and IS functions ensures consistency and simplifies training, ultimately reducing the time and resources spent on routine tasks.

Automation plays a pivotal role in streamlining operations. Repetitive tasks such as data entry, system monitoring, and report generation can be automated using advanced tools and scripting, freeing up staff to focus on more strategic initiatives. Adopting integrated platforms and cloud-based solutions enables seamless data sharing and collaboration across teams, minimizing delays caused by siloed systems. Additionally, adopting agile methodologies encourages iterative improvements and quick response to changing business needs, fostering a more adaptable IT and IS environment.

Effective communication and collaboration are vital to streamline operations. Establishing clear channels of communication ensures that teams are aligned on goals, priorities, and changes. Regular training and upskilling help staff stay current with new technologies and best practices, reducing errors and increasing productivity. Monitoring key performance indicators (KPIs) provides insights into the effectiveness of implemented changes, allowing for data-driven adjustments.

Vendor management and contract optimization can also contribute to streamlined operations. Negotiating favorable terms, consolidating vendors, and ensuring SLAs are met help prevent service disruptions and reduce administrative overhead. Emphasizing cybersecurity and data governance as integral parts of operational processes ensures that security measures are embedded into daily activities, preventing costly breaches and compliance issues.

Finally, fostering a culture of innovation and continuous improvement motivates teams to seek out new ways to optimize processes. Regular feedback loops and post-implementation reviews help identify successes and areas for further enhancement. By focusing on these strategies, organizations can create a more agile, efficient, and resilient IT and IS environment, ultimately supporting broader business objectives and driving long-term success.

54. Look through the text and tell about the types of IS mentioned in the text

Types of Information Systems

Information systems are essential components within organizations that facilitate the collection, processing, storage, and dissemination of information to support decision-making, coordination, and control. There are several types of information systems, each designed to serve specific organizational needs and operational levels.

At the foundational level, Transaction Processing Systems (TPS) handle the day-to-day transactional activities of an organization. These systems process routine transactions such as sales, receipts, payments, and inventory updates. They are crucial for capturing and storing data accurately and efficiently, providing the backbone for other information systems to operate upon.

Moving beyond basic transactions, Management Information Systems (MIS) are designed to synthesize data from TPS to generate summarized reports and support managerial decision-making. MIS typically focus on providing managers with timely and relevant information about the organization's operations, enabling them to monitor performance and identify areas needing attention. They often rely on predefined reports and basic data analysis tools.

For more advanced decision-making, Decision Support Systems (DSS) come into play. DSS are interactive, computer-based systems that assist managers and analysts in making non-routine decisions. They allow users to analyze data from various perspectives, run simulations, and explore different scenarios. DSS are particularly useful in complex situations where intuitive judgment must be combined with analytical models to arrive at optimal solutions.

Enterprise Systems or Enterprise Resource Planning (ERP) systems integrate core business processes across various departments such as finance, human resources, manufacturing, and supply chain management into a unified system. This integration promotes seamless information flow and consistency across the organization, improving efficiency and enabling better strategic planning. ERP systems are comprehensive and often involve significant customization to fit organizational needs.

Customer Relationship Management (CRM) systems focus on managing an organization's interactions with current and potential customers. They collect and analyze customer data to improve sales, marketing, and customer service efforts. By providing insights into customer preferences and behaviors, CRM systems help organizations enhance customer satisfaction and loyalty.
Supply Chain Management (SCM) systems coordinate the flow of goods, information, and finances among suppliers, manufacturers, and retailers. These systems optimize the supply chain process, reduce costs, improve delivery times, and enhance overall efficiency by providing real-time data on inventory levels, order status, and logistics.
Finally, Executive Support Systems (ESS) are designed for senior management and provide high-level summaries of organizational performance through dashboards, key performance indicators (KPIs), and strategic reports. ESS enable executives to monitor external and internal environments, support strategic planning, and make informed decisions rapidly.

In summary, the landscape of information systems is diverse, with each type tailored to meet specific organizational needs—from handling routine transactions to supporting complex strategic decisions. The integration and effective management of these various systems are vital for organizational success in today's data-driven environment.

55. Look through the text and tell about a DSS (Decision Support System)

DSS

Information systems are essential components within organizations that facilitate the collection, processing, storage, and dissemination of information to support decision-making, coordination, and control. There are several types of information systems, each designed to serve specific organizational needs and operational levels.
DSS, or Decision Support System, is a type of computer-based information system designed to assist managers and decision-makers in making informed and effective decisions. Unlike traditional information systems that primarily focus on data collection and processing, DSS emphasizes providing relevant information, analytical tools, and models to support complex decision-making processes.
A DSS typically integrates data from various sources, including internal databases, external data, and real-time information, to create a comprehensive view of the situation at hand. It offers interactive capabilities that allow users to query data, perform what-if analyses, and simulate different scenarios. This flexibility helps decision-makers assess potential outcomes and choose the most appropriate course of action.
The core components of a DSS include a database management system, which stores and manages data; a model management system, which contains analytical models and algorithms; and a user interface, which facilitates interaction between the user and the system. These components work together to provide timely and relevant insights, enabling managers to solve problems more effectively, plan strategically, and respond swiftly to changing conditions.
DSS can be tailored to specific organizational needs, such as financial planning, supply chain management, or marketing strategy. Their ability to handle unstructured or semi-structured problems makes them especially valuable in complex decision environments where intuition alone may not suffice. As technology advances, modern DSS increasingly incorporate artificial intelligence and machine learning techniques to enhance their predictive capabilities and automate certain decision processes, further empowering organizations to make smarter, data-driven choices.

56. Look through the text and tell about Enterprise Resource Planning (ERP) Information System

Enterprise Resource Planning (ERP) Information System

Enterprise Resource Planning (ERP) refers to a comprehensive suite of integrated software applications designed to streamline and manage the core business processes within an organization. These processes typically encompass areas such as finance, human resources, supply chain management, manufacturing, procurement, customer relationship management (CRM), and more. The primary goal of ERP systems is to facilitate the seamless flow of information across different departments, fostering improved efficiency, accuracy, and decision-making.

ERP systems are built on a centralized database that ensures all data is consistent, up-to-date, and accessible to authorized personnel across the enterprise. This integration eliminates data silos, reduces redundancy, and minimizes manual entry errors, thereby enabling real-time insights into various operational aspects. By providing a unified platform, ERP systems help organizations respond swiftly to changing market conditions, optimize resource allocation, and enhance overall productivity.

The architecture of ERP solutions can vary, ranging from on-premises deployments to cloud-based platforms. Cloud ERP has gained popularity due to its scalability, lower upfront costs, easier maintenance, and accessibility from multiple locations. On-premises ERP systems, on the other hand, are hosted within the company's own infrastructure, offering greater control but often requiring significant investment in hardware and IT support.

Implementing an ERP system is a complex process that involves careful planning, customization, and change management. Organizations must assess their unique needs, select an appropriate ERP solution, and often tailor it to fit their specific workflows. The deployment process typically includes data migration, user training, and ongoing support to ensure the system's effective adoption. Successful ERP implementation can lead to enhanced operational efficiency, better compliance with regulations, improved customer service, and increased profitability.

Despite its many benefits, ERP adoption also presents challenges. These include high implementation costs, potential disruption during the transition period, resistance to change among employees, and the need for continuous updates and maintenance. Furthermore, selecting the right ERP solution that aligns with organizational goals and future growth plans is crucial to maximize return on investment.

In recent years, advancements in technology have further enriched ERP systems. The integration of artificial intelligence (AI), machine learning, advanced analytics, and Internet of Things (IoT) capabilities has transformed traditional ERP into intelligent enterprise platforms. These innovations enable predictive analytics, automated decision-making, and proactive management of business processes.

Overall, ERP systems play a vital role in modern enterprise management by fostering greater operational cohesion, improving data accuracy, and supporting strategic decision-making. As businesses face increasing complexity and competitive pressures, ERP remains a critical tool for achieving operational excellence and sustaining growth.

57. Look through the text and tell about Customer Relationship Management Information System

Customer Relationship Management Information System

Customer Relationship Management (CRM) is a strategic approach that organizations adopt to build, maintain, and enhance their relationships with current and potential customers. At its core, CRM revolves around understanding customer needs, preferences, and behaviors to foster loyalty and drive sustained business growth. It integrates a combination of technology, processes, and people to deliver personalized experiences that meet or exceed customer expectations.

The fundamental goal of CRM is to cultivate long-term relationships that benefit both the customer and the organization. By doing so, companies can improve customer satisfaction, increase retention rates, and maximize lifetime value. To achieve this, CRM systems collect and analyze vast amounts of customer data from various touchpoints, including sales, marketing, customer service, and social media interactions. This data-driven approach enables organizations to segment their customer base effectively, identify high-value clients, and tailor marketing campaigns or service offerings accordingly.

Technologically, CRM systems are often built on sophisticated software platforms that facilitate the storage, retrieval, and analysis of customer information. These platforms provide functionalities such as contact management, sales tracking, marketing automation, and customer support management. By centralizing customer data, CRM tools ensure that all departments within an organization have a unified view of each customer, fostering better communication and coordination across teams.

Implementing a successful CRM strategy requires more than just deploying technology; it demands a cultural shift within the organization. Employees need to be trained to leverage CRM tools effectively and to prioritize customer-centric behaviors. Moreover, organizations must develop

processes that support consistent engagement with customers, ensuring that interactions are personalized, timely, and relevant. For example, a business might use CRM insights to send targeted promotions to customers based on their purchase history or to proactively address service issues before they escalate.

CRM also plays a vital role in marketing. By analyzing customer data, companies can identify trends, preferences, and buying patterns, which allows them to design more effective marketing campaigns. Personalized marketing efforts tend to have higher conversion rates, enhancing the overall return on investment. Additionally, CRM can facilitate cross-selling and upselling opportunities, further increasing revenue streams.

Customer service is another critical aspect of CRM. When organizations have access to comprehensive customer histories, they can resolve issues more efficiently and provide a seamless experience. This not only boosts customer satisfaction but also encourages repeat business and positive word-of-mouth referrals. Many CRM systems include features such as case management, knowledge bases, and live chat, which empower customer service teams to deliver prompt and effective support.

In today's increasingly digital and competitive environment, CRM has become indispensable for businesses seeking to differentiate themselves. It enables organizations to develop a deep understanding of their customer base, anticipate needs, and deliver tailored experiences that foster loyalty. As customer expectations continue to evolve, CRM strategies must also adapt, leveraging emerging technologies such as artificial intelligence and machine learning to gain even deeper insights and automate personalized interactions.

In conclusion, Customer Relationship Management is a comprehensive, strategic approach that integrates technology, processes, and people to create meaningful and lasting relationships with customers. It emphasizes understanding customer needs, delivering personalized experiences, and fostering loyalty—all essential components for achieving sustainable business success in a highly competitive marketplace.

58. Look through the text and tell why Mobile devices have become indispensable tools in the realm of Information Technology (IT)

Mobile devices as IT tools

Mobile devices have become indispensable tools in the realm of Information Technology (IT), transforming the way individuals and organizations operate, communicate, and manage data. These compact, portable gadgets—such as smartphones, tablets, and wearable devices—offer a level of flexibility and connectivity that was unimaginable a few decades ago, making them central to modern IT ecosystems.

One of the primary advantages of mobile devices as IT tools lies in their ability to facilitate ubiquitous access to information. With internet connectivity through cellular networks or Wi-Fi, users can retrieve, share, and manipulate data from virtually any location. This constant connectivity enables real-time communication via email, instant messaging, video conferencing, and social media platforms, fostering collaboration beyond traditional office boundaries. As a result, remote work and telecommuting have become more efficient and widespread, supported by mobile devices that serve as portable offices.

Moreover, mobile devices have revolutionized enterprise operations through the proliferation of enterprise mobility solutions. These include mobile applications tailored to specific business needs, such as customer relationship management (CRM), enterprise resource planning (ERP), and supply chain management systems. By leveraging mobile apps, employees can access critical business data on the go, make informed decisions promptly, and respond swiftly to changing situations. This agility enhances productivity and competitiveness, especially in industries like logistics, retail, healthcare, and manufacturing.

Security, however, remains a crucial consideration when integrating mobile devices into IT frameworks. As these devices often hold sensitive data and access company networks, implementing robust security measures is essential. Technologies such as biometric authentication, encryption, remote wipe capabilities, and Virtual Private Networks (VPNs) help safeguard corporate information. Additionally, Mobile Device Management (MDM) solutions enable IT administrators to monitor, control, and secure mobile devices, enforce policies, and ensure compliance with organizational standards.

Mobile devices also facilitate data collection and analysis through various sensors and applications. For example, in industries like healthcare, wearables and mobile health apps monitor vital signs, providing real-time data that can be used for diagnostics and patient management. Similarly, in field services, mobile devices equipped with GPS and camera functionalities allow workers to document and transmit information directly from the site, streamlining workflows and reducing paperwork.

Furthermore, mobile devices serve as platforms for innovative technologies such as augmented reality (AR), virtual reality (VR), and artificial intelligence (AI). These advancements enable immersive training, enhanced customer experiences, and smarter business processes. For instance, AR-enabled mobile apps can assist technicians in complex repairs by overlaying instructions onto physical equipment, reducing errors and increasing efficiency.

The proliferation of mobile devices has also led to the emergence of the Bring Your Own Device (BYOD) trend, where employees use their personal devices for work purposes. While this practice boosts flexibility and reduces organizational costs, it also introduces challenges related to data security, privacy, and device management. Organizations must develop comprehensive policies and deploy appropriate security tools to mitigate risks associated with BYOD.

In conclusion, mobile devices are pivotal IT tools that empower users with unparalleled access, flexibility, and functionality. They have reshaped enterprise workflows, enhanced communication, and driven innovation across various sectors. As technology continues to evolve, mobile devices will likely become even more integrated with emerging trends like 5G, IoT, and edge computing, further amplifying their role in the digital transformation of organizations worldwide.

59. Look through the text and tell about Networking as IT element

Networking as IT element

Networking is a fundamental aspect of information technology that involves the interconnection of computers, servers, and other digital devices to facilitate communication and data exchange. It serves as the backbone of modern digital infrastructure, enabling businesses, organizations, and individuals to share resources efficiently and securely. At its core, networking encompasses a variety of components, protocols, and architectures designed to ensure reliable connectivity and data transmission across diverse environments.

One of the primary goals of networking is to enable seamless communication between devices, regardless of their physical locations. This is achieved through the use of network topologies such as star, bus, ring, and mesh, each offering different advantages in terms of redundancy, scalability, and ease of maintenance. The physical hardware involved includes routers, switches, hubs, bridges, and cables, which work together to create the physical network infrastructure.

Protocols are essential for establishing and maintaining communication between devices. The Internet Protocol Suite (TCP/IP) is the most widely used set of protocols, providing the foundation for internet communication. TCP/IP manages data transmission, addressing, routing, and error handling, ensuring that information reaches its intended destination accurately and efficiently. Other protocols like HTTP, FTP, SMTP, and DNS facilitate specific types of communication such as web browsing, file transfer, email exchange, and domain name resolution.

Networking can be classified into various types based on scope and scale. Local Area Networks (LANs) connect devices within a limited geographical area, such as an office building or campus. Wide Area Networks (WANs) cover larger regions, often connecting multiple LANs across cities or countries, with the internet being the largest example of a WAN. Wireless networks (Wi-Fi) have become increasingly prevalent, providing mobility and convenience, especially in environments where cabling is impractical.

Security is a critical aspect of networking. Protecting data integrity, confidentiality, and availability involves implementing firewalls, encryption, intrusion detection systems, and access controls. As networks grow more complex, maintaining security becomes more challenging but also more vital, especially with the rise of cyber threats and data breaches.

Networking also involves addressing performance and reliability concerns. Techniques such as load balancing, redundancy, Quality of Service (QoS), and network monitoring help ensure optimal performance and minimize downtime. Network administrators play a crucial role in designing, implementing, and maintaining networks to meet the evolving needs of users and technologies.

In recent years, advancements like software-defined networking (SDN), network function virtualization (NFV), and the adoption of cloud computing have transformed traditional networking

paradigms. These innovations offer greater flexibility, scalability, and automation, enabling networks to adapt rapidly to changing demands. The proliferation of Internet of Things (IoT) devices further emphasizes the importance of robust, secure, and efficient networking solutions.
In summary, networking in IT is a dynamic and vital field that underpins almost every aspect of modern digital life. It requires a combination of hardware expertise, protocol knowledge, security practices, and strategic planning to create networks that are fast, reliable, and secure. As technology continues to evolve, networking will remain a core component of IT, enabling innovation and connectivity across the globe.

60. Look through the text and tell about Workflows and IS

Workflows and IS
Workflows and Information Systems (IS) are fundamental components of modern organizational operations, serving to streamline processes, improve efficiency, and facilitate effective decision-making. A workflow refers to the sequence of tasks or activities needed to complete a specific business process, often involving multiple stakeholders and systems. An Information System, on the other hand, encompasses the technology, people, and processes that collect, process, store, and distribute information to support organizational goals.
Integrating workflows with IS involves designing and implementing systems that automate and optimize business processes. This integration helps reduce manual effort, minimize errors, and ensure consistency across operations. For example, in a customer service department, an automated workflow within the IS can route customer inquiries to the appropriate representatives, track response times, and generate reports for performance analysis. Such automation not only enhances efficiency but also improves customer satisfaction.

Effective workflows within IS require clear process mapping and understanding of organizational needs. This involves analyzing existing processes, identifying bottlenecks, and designing new workflows that leverage technology to address these issues. Workflow management tools within IS enable visualization, monitoring, and modification of processes, providing flexibility and control. They also facilitate collaboration among team members by providing shared platforms for task management and communication.
Furthermore, the deployment of enterprise resource planning (ERP) systems exemplifies how integrated IS can support comprehensive workflows across departments such as finance, supply chain, and human resources. These systems enable real-time data sharing and process coordination, leading to better resource management and strategic planning. The automation of routine tasks through workflows within such systems allows staff to focus on more strategic activities, enhancing overall productivity.
However, designing workflows and IS integration also poses challenges. Resistance to change, complexity of processes, and the need for ongoing maintenance are common hurdles. Proper change management, user training, and continuous improvement are essential to ensure successful implementation. Additionally, security considerations must be addressed to protect sensitive information within workflows and IS.
In conclusion, workflows and Information Systems are interdependent elements that, when effectively aligned, can transform organizational operations. They enable automation, improve accuracy, foster collaboration, and provide valuable insights through data analytics. As technology evolves, organizations must continuously refine their workflows and IS to adapt to changing business environments and maintain a competitive edge.

9. Материально-техническое и учебно-методическое обеспечение дисциплины

9.1. Перечень основной и дополнительной учебной литературы

Основная литература

1. Сосунова Г. А. Учебник французского языка для таможенников. Часть 2: учебник: учебник / Г. А. Сосунова. - Учебник французского языка для таможенников. Часть 2 - Москва: Российская таможенная академия, 2011. - 300 с. - 978-5-9590-0261-9. - Текст: электронный. // IPR SMART: [сайт]. - URL: https://www.iprbookshop.ru/69841.html (дата обращения: 16.03.2025). - Режим доступа: по подписке

2. Сосунова Г. А. Французский язык для подготовки специалистов таможенной службы. В 2 частях. Ч.2: учебник: учебник / Г. А. Сосунова. - Французский язык для подготовки специалистов таможенной службы. В 2 частях. Ч.2 - Москва: Российская таможенная академия, 2018. - 218 с. - 978-5-9590-1011-9. - Текст: электронный. // IPR SMART: [сайт]. - URL: https://www.iprbookshop.ru/93229.html (дата обращения: 16.03.2025). - Режим доступа: по подписке

3. Герасимов И.П. Методические указания по английскому языку для магистров и аспирантов. - М.: УПП "Репрография" МИИГАиК, 2016. - 44 с.

4. Овсиенко Т. В. Grundstufe Deutsch: учебник немецкого языка: учебник немецкого языка / Т. В. Овсиенко, Е. И. Петрова, Л. И. Шаповалова. - Grundstufe Deutsch - Ростов-на-Дону, Таганрог: Издательство Южного федерального университета, 2020. - 217 с. - 978-5-9275-3626-9. - Текст: электронный. // IPR SMART: [сайт]. - URL: https://www.iprbookshop.ru/107996.html (дата обращения: 16.03.2025). - Режим доступа: по подписке

5. Орловская И.В. Учебник английского языка для студентов технических университетов и вузов. / И.В. Орловская, Л.С. Самсонова, А.И. Скубриева. - 7-е изд. - Издательство МГТУ им. Н.Э. Баумана, 2007. - 448 - 978-5-7038-2599-0. - Текст: непосредственный.

6. Орловская И.В. Учебник английского языка для студентов технических университетов и вузов / И.В. Орловская, Л.С. Самсонова, А.И. Скубриева. - 8-е изд. - Издательство МГТУ им. Н.Э. Баумана, 2008. - 448 - 978-5-7038-2599-0. - Текст: непосредственный.

Дополнительная литература

1. Бонк Н.А. Учебник английского языка. В 2-х частях. Ч. 1. кн.1, Ч. 1. кн.2, Ч. 2. кн.1, Ч. 2. кн.2. / Н.А. Бонк, Г.А. Котий, Н.А. Лукьянова. - АРТ КПМ, 1994. - Ч. 2. кн.2 302 - 5-86088-031-6. - Текст: непосредственный.

9.2. Профессиональные базы данных и ресурсы «Интернет», к которым обеспечивается доступ обучающихся

Профессиональные базы данных

Не используются.

Ресурсы «Интернет»

1. http://www.homeenglish.ru/Grammar.htm - Английская грамматика на HomeEnglish.ru
2. http://www.native-english.ru/grammar - Практическая грамматика английского языка на Grammar.Sourceword.com - Грамматика английского языка на Native-English.ru
3. https://englishgrammar.org - Английская грамматика с упражнениями
4. http://www.study.ru/support/handbook - Справочник по грамматике английского языка на Study.ru
5. http://study-english.info - Сайт для изучающих английский язык, студентов, преподавателей вузов и переводчиков
6. https://puzzle-english.com - Обучение через фильмы, сериалы и упражнения.
7. https://lingualeo.com - Изучение языка через его различные аспекты
8. https://4lang.ru - Бесплатный тренажёр для изучения слов.
9. https://www.multitran.com - Словарь общеупотребительной и терминологической лексики

10. https://dic.academic.ru - Словари и энциклопедии (в то числе словари терминологической лексики)

11. https://onelook.com - Толковые словари английского языка (толкование, употребление, произношение, коллокации)

9.3. Программное обеспечение и информационно-справочные системы, используемые при осуществлении образовательного процесса по дисциплине

Перечень программного обеспечения
(обновление производится по мере появления новых версий программы)
Не используется.

Перечень информационно-справочных систем
(обновление выполняется еженедельно)
Не используется.

9.4. Оборудование и технические средства обучения

Учебная аудитория
ТВ - 1 шт.

10. Методические указания по освоению дисциплины (модуля)

С целью успешного освоения данного предмета студенту необходимо выполнять домашние работы по указанным преподавателям темам и представленным на занятиях материалам. Для более успешного выполнения работы студенту предлагается использование учебно-методических материалов, соответствующих указанной теме.

Самостоятельная работа студентов описывается и регулируется:
- Методическими рекомендациями по дисциплине;
- Методическими рекомендациями по организации самостоятельной работы студентов МИИГАиК.

Методические рекомендации студентам по освоению дисциплины
Самостоятельная работа студентов проводится под руководством преподавателя и подразумевает изучение теоретического материала и контроль его усвоения, подготовку пересказов текстов и создание самостоятельных оригинальных рассказов и презентаций по темам, изучаемым в рамках учебной дисциплины, подготовку и перевод текстов, выполнение различных грамматических, лексических, лексико-грамматических упражнений.
Методика самостоятельной работы предварительно разъясняется преподавателем и в последующем может уточняться с учетом индивидуальных особенностей студентов. Время и место самостоятельной работы выбираются студентами по своему усмотрению с учетом рекомендаций преподавателя.
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При подготовке к практическим занятиям, руководствуясь планом и списком рекомендуемой

литературы, необходимо изучить тему так, чтобы по каждому из предложенных вопросов студент мог дать развернутый, обстоятельный ответ.
Внеаудиторная самостоятельная работа студентов включает:
- Работа над конспектом лекции
- Подготовка к практическому занятию
- Доработка конспекта лекции с применением учебника, методической литературы, дополнительной литературы
- Подбор, изучение, анализ и конспектирование рекомендованной литературы
- Самостоятельное изучение отдельных тем, параграфов
- Подготовка к экзамену
Для успешного освоения учебной дисциплины и достижения поставленных целей необходимо внимательно ознакомиться с настоящей рабочей программой учебной дисциплины. Ее может представить преподаватель на вводном занятии или самостоятельно обучающийся использует информацию на официальном Интернет-сайте Университета.
Следует обратить внимание на список основной и дополнительной литературы, которая имеется в электронной библиотечной системе Университет, на предлагаемые преподавателем ресурсы информационно-телекоммуникационной сети Интернет.
Методические рекомендации при работе над конспектом лекций
В ходе лекционных занятий необходимо вести конспектирование учебного материала. Обращать внимание на категории, формулировки, раскрывающие содержание тех или иных явлений и процессов, научные выводы и практические рекомендации, положительный опыт в ораторском искусстве. Желательно оставить в рабочих конспектах поля, на которых делать пометки из рекомендованной литературы, дополняющие материал прослушанной лекции, а также подчеркивающие особую важность тех или иных теоретических положений. Задавать преподавателю уточняющие вопросы с целью уяснения теоретических положений, разрешения спорных ситуаций.
Важно развивать умение сопоставлять источники, продумывать изучаемый материал.
Большое значение имеет совершенствование навыков конспектирования .
Преподаватель может рекомендовать студентам следующие основные формы записи: план (простой и развернутый), выписки, тезисы.
Результаты конспектирования могут быть представлены в различных формах.
План – это схема прочитанного материала, краткий (или подробный) перечень вопросов, отражающих структуру и последовательность материала. Подробно составленный план вполне заменяет конспект.
Конспект – это систематизированное, логичное изложение материала источника. Различаются четыре типа конспектов:
• План-конспект – это развернутый детализированный план, в котором достаточно подробные записи приводятся по тем пунктам плана, которые нуждаются в пояснении.
• Текстуальный конспект – это воспроизведение наиболее важных положений и фактов источника.
• Свободный конспект – это четко и кратко сформулированные (изложенные) основные положения в результате глубокого осмысливания материала. В нем могут присутствовать выписки, цитаты, тезисы; часть материала может быть представлена планом.
• Тематический конспект – составляется на основе изучения ряда источников и дает более или менее исчерпывающий ответ по какой-то схеме (вопросу).
Виды и формы отработки пропущенных занятий
Студент, пропустивший занятия, обязан побеседовать с преподавателем по пропущенной теме, показать выполнение в тетради письменных заданий. Устные темы сдаются в обязательном порядке после аудиторных занятий.

Описание возможностей изучения дисциплины лицами с ОВЗ и инвалидами

При необходимости обучения студентов-инвалидов и лиц с ограниченными возможностями здоровья аудиторные занятия могут быть заменены или дополнены изучением полнотекстовых лекций, презентаций, видео- и аудиоматериалов в электронной

информационно-образовательной среде (ЭИОС) университета. Индивидуальные задания подбираются в адаптированных к ограничениям здоровья формах (письменно или устно, в форме презентаций). Выбор методов обучения зависит от их доступности для инвалидов и лиц с ограниченными возможностями здоровья.

Рабочая программа дисциплины для инвалидов и лиц с ограниченными возможностями здоровья разрабатывается индивидуально с учетом особенностей психофизического развития, индивидуальных возможностей и состояния здоровья таких обучающихся.