МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ
федеральное государственное бюджетное образовательное учреждение
высшего образования
МОСКОВСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ГЕОДЕЗИИ И КАРТОГРАФИИ
(МИИГАиК)

Факультет архитектуры и градостроительства
Кафедра лингвистики

ДОКУМЕНТ ПОДПИСАН
ЭЛЕКТРОННОЙ ПОДПИСЬЮ

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Владелец: Степанченко Алексей Леонидович
Действителен: с 21.07.2025 по 14.10.2026

«УТВЕРЖДАЮ»
Проректор
А. Л. Степанченко
15 мая 2026 г.

РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ (МОДУЛЯ)
ОБЩЕ-ГУМАНИТАРНЫЙ
«Б1.О.02.03 ИНОСТРАННЫЙ ЯЗЫК»

Уровень высшего образования: бакалавриат

Направление подготовки: 07.03.04 Градостроительство

Направленность(профиль) подготовки: Проектирование устойчивой городской среды

Квалификация (степень) выпускника: бакалавр

Форма обучения: очная

Год набора (приема на обучение): 2026

Срок получения образования: 5 лет

Объем: в зачетных единицах: 5 з.е.
в академических часах: 180 ак.ч.

Москва, 2026

Разработчики:

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Рабочая программа дисциплины (модуля) составлена в соответствии с требованиями ФГОС ВО по направлению подготовки 07.03.04 Градостроительство, утвержденного приказом Минобрнауки от 08.06.2017 № 511

Согласование и утверждение

№	Подразделение	Ответственное лицо	ФИО	Виза	Дата, протокол (при наличии)
1	факультет Архитектуры и градостроительства	Председатель ученого совета факультета	Хачатрян К. О.	Рассмотрено	02.12.2025, № 2-2025/2026

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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 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 Выполнять переводы технических текстов с иностранного языка

Владеть:

УК-4.1/Нв1 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 Основные способы работы на языковым и речевым материалом

Уметь:

УК-4.2/Ум1 Выполнять перевод технических текстов с иностранного языка

Владеть:

УК-4.2/Нв1 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 Нормы произношения, лексику иностранного языка общеупотребутельного, терминологического и профессионального содержания; типовые способы построения высказываний в устной и письменной речи

Уметь:

УК-4.3/Ум1 Осуществляет коммуникацию с зарубежными партнерами; переводит научно-техническую литературу, связанную с профессиональной деятельностью

Владеть:

УК-4.3/Нв1 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 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 Осуществлять коммуникацию с зарубежными партнерами; переводить научно-техническую литературу по вопросами, связанным с профессиональной деятельностью

Владеть:

УК-4.4/Нв1 Компенсаторными умениями, помогающими преодолеть "сбои" в коммуникации, вызванные объективными и субъективными, социокультурными причинами

3. Место дисциплины в структуре ОП

Дисциплина (модуль) Б1.О.02.03 «Иностранный язык» относится к обязательной части образовательной программы и изучается в семестре(ах): 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)
3 семестр	72	2	34	11	Экзамен (27)
4 семестр	108	3	34	38	Экзамен (36)
Всего	180	5	68	49	63

5. Содержание дисциплины (модуля)

5.1. Разделы, темы дисциплины и виды занятий

(часы промежуточной аттестации не указываются)

Наименование раздела, темы	Всего	Практические занятия	Самостоятельная работа	Планируемые результаты обучения, соотнесенные с результатами освоения программы
Раздел 1. Вводно-коррективный курс	**6**	**4**	**2**	УК-4.1
Тема 1.1. Моя биография, семья	6	4	2	
Раздел 2. Общий курс иностранного языка	**37**	**30**	**7**	УК-4.1 УК-4.2
Тема 2.1. Современная система образования в России, мой институт	8	6	2	
Тема 2.2. Проблемы экологии в современном мире.	8	6	2	
Тема 2.3. Страны изучаемого языка	7	6	1	
Тема 2.4. . Система высшего образования в США и Великобритании	7	6	1	
Тема 2.5. Россия в современном мире, Москва, мой родной город.	7	6	1	
Раздел 3. Профессионально-ориентированный иностранный язык	**74**	**34**	**40**	УК-4.1 УК-4.2 УК-4.3

Тема 3.1. Моя специальность: Современное состояние изучаемой науки, технологии.	39	18	21	УК-4.4
Тема 3.2. Моя специальность: История изучаемой науки и видные ученые	35	16	19	
Итого	**117**	**68**	**49**	

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)

Текущий контроль

Вид (форма) контроля
Контрольная работа

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

Текущий контроль

Вид (форма) контроля
Контрольная работа

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.

Текущий контроль

Вид (форма) контроля
Контрольная работа

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
Контрольная работа

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: Экзамен, 3 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: Экзамен, 4 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.

7. Оценочные материалы текущего контроля

Раздел 2. Общий курс иностранного языка

Контролируемые ИДК: УК-4.1 УК-4.2

Тема 2.3. Страны изучаемого языка

Форма контроля/оценочное средство: Контрольная работа

Вопросы/Задания:

1. Переведите предложения на формы множественного числа существительных

1. The criteria (not criterions) for sustainable design are constantly evolving.
2. Modern stadia (not stadiums) often feature retractable roofs.
3. The museum displayed ancient arcana (not arcanums) of Gothic architecture.
4. Phenomena (not phenomenons) like bioluminescent facades redefine urban aesthetics.
5. The architect studied medieval strata (not stratums) in the excavation site.
6. The fora (not forums) on urban planning attracted global experts.
7. The blueprint included precise indices (not indexes) for load-bearing walls.
8. Lumina (not lumens) from skylights created dynamic shadow patterns.
9. The design used intersecting axes (not axises) for symmetry.
10. The ruins revealed hidden cella (not cellas) from Roman temples.
11. The contractor ordered 50 sheep of tempered glass (not sheeps).
12. The plaza's series of arches were inspired by Moorish design (not serieses).
13. The exhibition featured deer-horn chandeliers (not deers).
14. The curvier (not more curvy) facade softened the building's harsh lines.
15. This was the most optimal (not optimest) layout for energy efficiency.
16. The less conventional materials included recycled mycelium bricks.
17. The state-of-the-art acoustics enhanced the concert hall's design.
18. A solar-powered canopy reduced the building's carbon footprint.
19. The abstract (not abstracts) in her sketches challenged traditional forms.
20. The sublime (not sublimes) in Gothic architecture lies in its verticality.

2. Переведите предложения на пассивные конструкции

1. Sustainable materials are prioritized in modern eco-friendly designs.
2. Glass facades are used to maximize natural light in high-rise buildings.
3. The new museum is being constructed with earthquake-resistant technology.
4. Traditional techniques are being revived in contemporary brick architecture.
5. The historic building was restored to preserve its original Art Deco features.
6. The blueprint was revised after the client requested additional floors.
7. The steel framework was being assembled when the storm delayed construction.
8. The interior was being redesigned while the exterior remained untouched.
9. The skyscraper's foundation has been reinforced to support future expansion.
10. Several heritage sites have been demolished due to urban redevelopment.
11. The permits had been approved before the groundbreaking ceremony.
12. The architect's proposal had been rejected before a better alternative was found.
13. The pedestrian bridge will be completed by the end of next year.
14. 3D-printed structures will be incorporated into affordable housing projects.
15. The renovation will have been finished before the grand reopening.
16. All safety inspections will have been conducted prior to occupancy.
17. Zoning laws must be followed to avoid legal complications.
18. This material can be repurposed for sustainable construction.
19. The ventilation system was designed by an award-winning engineer.
20. The ancient ruins are being studied for their historical significance.

3. Выберите слова, соответствующие определению

pediment fanlight quoins column pilaster eaves turret roofs facade dormer

1. _____ A support pillar, usually round, found on porches and as a decorative detail.

2. _____ A window opening at the roof level, topped by a front gable or shed roof.
3. _____ The face of a building, usually referring to the front.
4. _____ A semi-circular window placed atop a door, commonly seen in Federal and Colonial Revival style buildings.
5. _____ A triangular space created by a front facing gable roof, often seen in Classical Revivial style buildings.
6. A _____ is a narrowly protruding column attached to a wall, giving the illusion of a real free standing support column.
7. _____ can be steep, flat or gently sloped and take many forms, gable, gambrel, hipped, stepped gable, shed, pent or Mansard. The roof type is an important key to identifying the style of a building.
8. _____ A small tower at the corner of a building.
9. _____ are decorative rectangles or squares of stone, brick, wood or concrete, placed at the corners of buildings to add architectural interest.
10. _____ The edge of the roof that overhangs the exterior walls, sometimes with exposed rafters.

4. Заполните пропуски нужными словами

deriving horizontal designed masterpiece inhabit(v)
chimney interiors stained glass evolving create

Through the turn of the century, Wright's distinctively personal style was _____, and his work in these years foreshadowed his so-called "prairie style," a term _____ from the publication in 1901 of "A Home in a Prairie Town" which he designed for the Ladies' Home Journal.

Prairie houses were characterized by low, _____ lines that were meant to blend with the flat landscape around them. Typically, these structures were built around a central _____, consisted of broad open spaces instead of strictly defined rooms, and deliberately blurred the distinction between interior space and the surrounding terrain. Wright acclaimed "the new reality that is space instead of matter" and, about architectural _____, said that the "reality of a building is not the container but the space within." The W.W. Willits house, built in Highland Park, Illinois in 1902, was the first house that embodied all the elements of the prairie style. His _____ of the prairie style is the Robie House, built in Chicago in 1909.

Wright did not aspire simply to design a house, but to _____ a complete environment, and he often dictated the details of the interior. He designed _____, fabrics, furniture, carpet and the accessories of the house. Legend has it that, in at least one case, he even _____ the gowns of his client's wife. The controlling factor was seldom the wishes of the individual client, but Wright's belief that buildings strongly influence the people who _____ them. He believed that "the architect is a molder of men, whether or not he consciously assumes the responsibility."

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

Форма контроля/оценочное средство: Контрольная работа

Вопросы/Задания:

1. Переведите предложения с причастиями и герундием

1. Designing sustainable buildings requires a deep understanding of eco-friendly materials.
2. Constructing a skyscraper involves coordinating multiple teams of engineers and architects.
3. Incorporating natural light into a building enhances its aesthetic appeal.
4. Balancing form and function is essential when planning a modern home.
5. Using glass facades in architecture allows for blurring the line between indoor and outdoor

spaces.
6. Restoring historical buildings helps preserve cultural heritage while adapting them for modern use.
7. Studying Gothic architecture involves analyzing ribbed vaults and flying buttresses.
8. Employing parametric design techniques enables architects to create com-plex, flowing structures.
9. Optimizing space in urban architecture often means building vertically rather than horizontally.
10. Mimicking organic shapes in architecture can result in visually striking buildings.
11. Integrating smart technology into buildings improves energy efficiency while reducing costs.
12. Landscaping around a structure plays a key role in enhancing its overall design.
13. Experimenting with unconventional materials can lead to innovating architectural solutions.
14. Observing the symmetry in classical architecture helps in understanding its time-less appeal.
15. Combining steel and glass creates a sleek, modern look while ensuring structural stability.
16. Preserving old facades while renovating interiors is a common practice in adaptive reuse.
17. Sketching initial concepts is the first step in visualizing an architectural project.
18. Following zoning laws is crucial when developing urban infrastructure.
19. Contrasting traditional and contemporary styles can pro-duce captivating architectural hybrids.
20. Assessing the environmental impact of a building includes calculating its carbon footprint.

2. Выберите термин в соответствии с его описанием

cornice column tower roof cupola frieze porch parapet quoins eaves

1. A _____ is the finished edge of the roof where it meets the exterior wall, of varying sizes, sometime plain, but often decorative and marked by brackets, dentils, medalions or some other decorative feature.
2. A _____ is a decorative, small, projecting tower at the top of the roof of a building, often square, round or ocatagonal in shape.
3. A _____ is the panel beneath the cornice at the top of a building' exterior wall which is often ornamented with brackets, dentils or modallions.
4. A _____ is a low stone or brick wall at the top of a building.
5. _____ are decorative rectangles or squares of stone, brick, wood or concrete, placed at the corners of buildings to add architectural interest.
6. _____ The edge of the roof that overhangs the exterior walls, sometimes with exposed rafters.
7. _____ A roofed space outside the mains support walls of a building.
8. _____ A tall structure, either square or round in shape, rising higher than the rest of the building.
9. _____ A support pillar, usually round, found on porches and as a decorative detail.
10. _____ can be steep, flat or gently sloped and take many forms, gable, gambrel, hipped, stepped gable, shed, pent or Mansard. The roof type is an important key to identifying the style of a building.

3. Answer the question:

What does the science of history of architecture study?

1. Architecture development process in connection with the biological processes
2. The relationship between people and animals
3. Architecture development process in connection with the historical processes

4. Choose the correct expression:

The detailed study of a site is …

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

5. Complete the sentence using the correct word:

_____ is your address?

1. What

2. How
3. That

6. Choose the correct answer

Do you speak Japanese? No, I _____.

1. speaking not
2. speak not
3. don't

7. Pick up the correct word:

a person or company, responsible for the physical construction of a building is _____

1. scientist
2. constructor
3. doctor

8. Answer the question:

What do we call:
a thin tall structure usually rising above the castle or building that it is attached to?

1. tower
2. table
3. tree

9. Answer the question: When was the University of Geodesy and Cartography founded?

1. 1779
2. 1920
3. 2000

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

1. modality
2. time
3. voice

11. Choose the correct sentence:

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

Раздел 3. Профессионально-ориентированный иностранный язык

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

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

Форма контроля/оценочное средство: Контрольная работа

Вопросы/Задания:

1. Заполните пропуски соответствующими словами

gigantic constructed separated surrounding spatial
erected concrete L-shaped space buildings

The small Malcolm E. Willey House, designed in 1933 and _____ the following year in Minneapolis, marked the beginning of what amounted to a second career for Wright. Modest in size, the Willey House was low and _____ with little ornamentation and represented a revolutionary change in domestic planning; i.e., the living room and dining room were completely unified in a single _____, and the kitchen ("workspace") was only _____ from the living area by a range of shelves. This house is said to be the "bridge" between the prairie houses and the Usonian houses, the first of which was _____ in 1937 near Madison, Wisconsin. With the Usonian houses, Wright achieved his goal of providing a small, modestly priced and easily built house for the average middle-class family that possessed the aesthetic, organic and _____ characteristics of the prairie style house.

Wright's most important _____ constructed in the 1930's were Fallingwater (the Edgar

J. Kaufmann House) at Bear Run, Pennsylvania and the Administration Building of the S.C. Johnson and Son Company in Racine, Wisconsin. Both were designed in 1935-36 and each makes bold use of _____, but the two buildings are worlds apart in style and character. Combining features of the prairie houses and the California concrete block houses, Fallingwater has been described as "the apotheosis of the horizontal." Its cantilevered terraces soar dramatically over a natural waterfall, and the interior of the house blends seamlessly into the _____ woods. The Johnson Building, resembling a "_____ and beautiful machine," is based on the curve rather than the cantilever and turns inward upon itself, ignoring the existence of the outside world.

2. Переведите предложения с глаголами в сослагательном наклонении

1. It's essential that the design be sustainable and energy-efficient.
2. The client insists that the architect use natural materials whenever possible.
3. We recommend that the building have large windows for passive heating.
4. If the budget were unlimited, we would incorporate smart-home technology.
5. The structure would appear lighter if the columns were slimmer.
6. She designed the courtyard as though it were an open-air gallery.
7. It's crucial that the foundation be reinforced before construction begins.
8. The city council demands that the historic facade remain intact.
9. The contract stipulates that the contractor meet all safety regulations.
10. I suggest that the roof be sloped for better rainwater drainage.
11. They proposed that the plaza include more green spaces.
12. We prefer that the materials be locally sourced.
13. Be it a skyscraper or a cottage, functionality must come first.
14. So help me God, this building will withstand earthquakes.
15. Long live innovative architecture!
16. Suppose the client reject our initial proposal—what's Plan B?
17. It's time the government invest more in affordable housing.
18. I'd rather the design emphasize simplicity over ornamentation.
19. Had the architect considered acoustics, the concert hall would sound better.
20. Should the zoning laws change, we could add two more floors.

3. Переведите текст

Jean Nouvel's Unbuilt Visions: The Radical Architecture That Might Have Been

Few architects have generated as many groundbreaking—yet unrealized—designs as Jean Nouvel. His rejected or suspended projects reveal an even bolder creative mind than his built works suggest, offering tantalizing glimpses of alternative urban futures. These unbuilt schemes, ranging from floating museums to vertiginous skyscrapers, demonstrate Nouvel's unwavering commitment to architectural experimentation, even at the cost of practicality.

1. Tour Sans Fins (1989) – The Phantom of La Défense

Nouvel's most famous unbuilt work was meant to dominate Paris' skyline: a 424-meter tapered cylinder in La Défense, its facade transitioning from granite at the base to glass to aluminum and finally to a "disappearing" mirrored apex reflecting clouds. The design solved wind resistance through aerodynamic form while creating optical illusions of dematerialization. Canceled due to the 1990s recession, its legacy lives on in later supertalls like The Shard.

2. Lyon Concert Hall (1990s) – The Sonic Flower

A petal-like structure designed to bloom open during performances, this acoustically perfect hall would have combined Nouvel's signature light play with Bernard Tschumi's deconstructivist influences. Budget cuts killed the project, though fragments of its DNA appeared in his later Copenhagen Concert Hall.

3. Tokyo Opera City (1997 Competition) – The Fractured Mirror

Nouvel’s losing competition entry proposed a facade of shattered glass planes angled to reflect Tokyo’s skyline in cubist fragments. The jury deemed it too destabilizing for conservative clients—a fate shared by his unbuilt 2008 Tokyo Tower redesign, which would have clad the structure in LED panels displaying real-time weather data.

4. Marseille Maritime Terminal (2004) – The Floating Promenade

Envisioned as a kinetic pier with undulating canopies mimicking waves, this project fell victim to political turnover. Its fluid concrete forms later influenced Zaha Hadid’s Port House in Antwerp.

5. National Library of Kazakhstan (2009) – The Moebius Strip

A toroidal structure with 4 interlocking rings symbolizing Kazakhstan’s cultural crossroads. Rejected for its €1 billion cost, its DNA resurfaced in MAD Architects’ Harbin Opera House.

Why They Matter

These unrealized projects reveal Nouvel’s "architecture of resistance"—his willingness to:

- Challenge gravity (Vertical City in Singapore)
- Redefine public space (EuropaCity’s artificial climate dome)
- Provoke through form (Seine Musicale’s abandoned solar sail concept).

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

Форма контроля/оценочное средство: Контрольная работа

Вопросы/Задания:

1. Переведите текст

David Chipperfield and the Art of Silent Classicism

Among contemporary architects, few have engaged with classical principles as thoughtfully as Sir David Chipperfield (b. 1953). The British architect—winner of the 2023 Pritzker Prize—has spent four decades reinterpreting antiquity’s lessons for the modern age, creating buildings that whisper rather than shout their connections to the past. His work demonstrates how classical proportion, material honesty, and civic dignity can be translated into a language that feels both timeless and unmistakably contemporary.

A Quiet Rebellion Against Postmodernism

Educated at London’s Architectural Association during the 1970s—an era dominated by either Brutalism’s rawness or Postmodernism’s whimsy—Chipperfield developed an early aversion to architectural theatrics. His formative years in the office of Norman Foster and Richard Rogers exposed him to high-tech modernism, but travels through Italy and Japan cemented his belief in architecture’s anthropological roots. This dual influence produced a unique design philosophy: "Modern in means, classical in spirit."

Key Projects: The Classical Subtext

1. Neues Museum, Berlin (2009) – The Patina of Time

Chipperfield’s reconstruction of this 19th-century museum, bombed in WWII, became a masterclass in classical dialogue. Rather than replicating the original’s ornate neo-Renaissance halls, he:

- Preserved war scars on surviving walls
- Designed new sections in recessed concrete and handmade bricks
- Aligned new vaulted galleries with the original axial plan

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The result feels like a palimpsest—layers of history harmonized through proportion rather than ornament. The Egyptian Court’s columns, stripped of capitals but perfectly spaced, evoke stoa without literal mimicry.

2. Royal Academy Masterplan, London (2018) – Hidden Symmetry
For this 300-year-old institution, Chipperfield carved out a new subterranean gallery linking Burlington House to its 19th-century additions. The intervention appears minimalist, but its genius lies in:
A double-height "bridge" gallery mirroring the Academy's original courtyard proportions
York stone floors continuing the building's geological memory
Bronze door handles scaled to human touch, recalling Alberti's theories
3. Museo Jumex, Mexico City (2013) – The Abstracted Colonnade
This travertine-clad cube reimagines the classical colonnade as a geometric façade grid. The roof's sawtooth profile nods to industrial sheds while filtering light like a Roman oculus. Inside, the central stair—a deliberate processional route—echoes the spatial hierarchy of Renaissance palaces.

8. Оценочные материалы промежуточной аттестации

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

1. Answer the question:

What places of interest are there in London?

2. Answer the question:
What do you know about theaters in Moscow?
3. Answer the question:
What is the longest river in the European part of Russia? What can you say about it?
4. Answer the question:
Does Russia have a borderline with the USA?
5. Answer the question
In what way have computers changed our life?
6. Answer the question:
What do you know about climate in England?
7. Answer the question:
Why is the problem of water pollution becoming a global problem?
8. Answer the question:
What industrial applications of electricity do you know?
9. Answer the question:
What do you think is the most important technological breakthrough in history?
10. Answer the question:
How has technology impacted our work, studies and career?
11. Answer the question:
Is there a tech product you want these days? What is it? How will it make your life better?
12. Answer the question:
What do you think is the biggest advantage of modern technology?
13. Answer the question:
How have technological advances affected communication/ how we receive news/ the medical field/ education?
14. Answer the question:
How have widely used electronic drawing tools with extended databases and wide access to

information via computers change the job of an architect?

15. Answer the question:

How do you feel about artificial intelligence like Siri or Alexa?

16. Look through the text and answer the question:What are smart recycling systems?

Waste Management and Green Technology: Paving the Way for a Sustainable Future

The rapid growth of industrialization and consumerism has led to an alarming increase in waste generation, posing severe threats to the environment and human health. However, advancements in green technology are revolutionizing waste management, offering innovative solutions to reduce, reuse, and recycle waste efficiently.

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.

Challenges and the Way Forward

Despite progress, challenges like high costs, lack of infrastructure, and low public awareness persist. Governments and corporations must invest in:

- Extended Producer Responsibility (EPR) policies.
- Public education campaigns on waste segregation.
- Subsidies for green tech startups.

Green technology is transforming waste from an environmental burden into a resource. By adopting sustainable practices and supporting innovations, we can move toward a zero-waste future.

17. Look through the text and answer the question: What ultra-efficient electronics have advances in semiconductor technology led to?

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
   - Modular smart devices (e.g., Framework Laptop) allow easy upgrades, reducing electronic waste.
   - 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.

18. Look through the text and answer the question: How is the Internet of Things (IoT) revolutionizing environmental conservation?

IoT and Ecology: Smart Technologies for a Sustainable Planet

The Internet of Things (IoT) is revolutionizing environmental conservation by enabling real-time monitoring, data-driven decision-making, and automated resource management. From smart agriculture to pollution control, IoT bridges technology and ecology to foster a greener future.

How IoT Supports Ecological Sustainability

1. Environmental Monitoring

IoT sensors track critical ecological parameters:

- Air Quality: Networks of sensors (e.g., BreezoMeter) detect pollutants (CO_2, PM2.5) in cities.
- Water Conservation: Smart meters monitor river levels, detect leaks, and prevent waste (e.g., Sensus AquaSense).
- Wildlife Protection: GPS-enabled collars and acoustic sensors track endangered species and deter poaching.

2. Precision Agriculture

IoT optimizes farming while reducing environmental harm:

- Soil Sensors measure moisture/nutrient levels, minimizing water/fertilizer use.
- Drones & Smart Irrigation (e.g., CropX) analyze fields and deliver water only where needed.

3. Energy Efficiency & Smart Cities
• Smart Grids balance renewable energy (solar/wind) usage across neighborhoods.
• Waste Management: IoT-enabled bins (e.g., Enevo) signal collection trucks only when full, cutting fuel emissions.

4. Pollution & Disaster Control
• Forest Fire Detection: Early-warning systems (e.g., Dryad Networks) use solar-powered sensors to detect wildfires.
• Ocean Cleanup: Floating IoT drones (like The Ocean Cleanup's Interceptor) identify and collect plastic waste.
Future innovations may include:
• Biodegradable IoT sensors powered by plant energy.
• AI-powered ecology models predicting climate shifts.
IoT transforms passive ecological efforts into proactive, intelligent systems. By integrating smart technology with environmental science, we can combat climate change, conserve resources, and protect ecosystems more effectively.

19. Look through the text and answer the question: What is Advanced Waste-to-Energy (WtE)?

Modern Trends in Waste Management: Technology Driving Sustainability

As global waste generation continues to rise—exceeding 2.3 billion tons annually—innovative technologies and strategies are transforming waste management. From AI-powered sorting to circular economy models, modern trends focus on reducing landfill reliance, maximizing recycling, and converting waste into resources.

1. Smart Waste Collection & IoT
• Sensor-Enabled Bins: IoT-connected trash bins (e.g., Bigbelly) monitor fill levels and optimize collection routes, reducing fuel use.
• Blockchain Tracking: Ensures transparency in waste disposal and recycling chains (e.g., Plastic Bank's tokenized recycling).
2. AI and Robotics for Sorting
• AI-Powered Systems: Machines like AMP Robotics use computer vision to identify and sort recyclables with 99% accuracy.
• Waste-to-Resource Plants: Automated facilities separate metals, plastics, and organics for repurposing.
3. Circular Economy & Upcycling
• Brand-Led Initiatives: Companies like Adidas (sneakers from ocean plastic) and IKEA (furniture from recycled materials) close the loop on waste.
• Industrial Symbiosis: Factories exchange waste materials as raw inputs (e.g., using slag from steel production in cement).
4. Advanced Waste-to-Energy (WtE)
• Plasma Gasification: Converts non-recyclable waste into clean syngas for electricity.
• Biodegradable Waste Digesters: Systems like HomeBiogas turn food scraps into cooking fuel.
5. Zero-Waste Policies & Consumer Tech
• Bans on Single-Use Plastics: Over 100 countries have restricted plastic bags/straws.
• Apps for Waste Reduction: Platforms like Too Good To Go combat food waste by connecting users with surplus meals.
Challenges & Future Outlook
• High Costs: Scaling advanced tech (e.g., AI sorting) requires investment.
• Behavioral Change: Public education is critical to boost recycling participation.
• E-Waste Surge: Fast-growing electronic waste demands better recycling tech.

Modern waste management blends technology, policy, and consumer action to turn trash into treasure. By adopting these trends, societies can cut pollution, conserve resources, and move toward a zero-waste future.

20. Look through the text and answer the question: What are modern Trends in Ocean Cleaning

Modern Trends in Ocean Cleaning: Innovative Solutions for a Plastic-Free Future

The world's oceans face an unprecedented pollution crisis, with 11 million metric tons of plastic entering marine ecosystems annually. Modern technologies and initiatives are revolutionizing ocean cleaning, combining AI, robotics, and community-driven efforts to restore marine health.

1. Large-Scale Cleanup Systems

- The Ocean Cleanup Project: Deploys Interceptor Barriers in rivers (capturing 80% of riverine plastic) and System 03 (a massive floating barrier cleaning the Great Pacific Garbage Patch).
- Seabin Project: Floating trash collectors in marinas filter water 24/7, removing microplastics and oil.
- AI-Powered Drones (e.g., Clear Blue Sea): Autonomous vessels identify and collect floating debris using machine learning.
- Robotic Fish (e.g., WasteShark): Solar-powered aqua drones "eat" plastic waste in harbors.

3. Microplastic Filtration

- StormX (by The Great Bubble Barrier): Uses air bubbles to trap microplastics in rivers before they reach oceans.
- Filtering Washing Machines: New tech captures synthetic microfibers released during laundry cycles.

4. Bioremediation & Natural Solutions

- Plastic-Eating Enzymes (e.g., PETase): Genetically modified bacteria break down PET plastic in seawater.
- Oyster Reef Restoration: Natural filters improve water quality while stabilizing coastlines.

5. Policy and Community Action

- UN Plastic Treaty: A global agreement to end plastic pollution by 2024.
- #TeamSeas Initiative: Crowdfunded campaigns remove 1 pound of trash per $1 donated.

Challenges and Future Directions

- Scale: Current efforts address <1% of ocean plastic; scaling tech is critical.
- Funding: High costs for R&D and deployment require public-private partnerships.
- Deep-Sea Waste: Most tech targets surface waste, but deep-sea pollution remains unresolved.

From robotic cleaners to international policies, modern ocean cleaning trends offer hope for reversing marine pollution. Success depends on technology, global cooperation, and individual action—because saving the oceans starts on land.

21. Look through the text and answer the question: What is 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…”

22. Look through the text and answer the question: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.

23. Look through the text and answer the question: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.

24. Look through the text and answer the question: 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.

25. Look through the text and answer the question: 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.

26. Look through the text and answer the question: 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.

27. Look through the text and answer the question: 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.

28. Look through the text and answer the question: What eco-friendly materials are used nowadays?

Green Technology and Sustainable Mobile Phones
The rapid growth of the smartphone industry has raised environmental concerns, from excessive e-waste to high carbon emissions. However, modern green technology is transforming mobile phones into eco-friendly devices, promoting sustainability without compromising performance.

Eco-Friendly Materials
Many manufacturers now use recycled or biodegradable materials. For example, companies like Fairphone design modular phones with responsibly sourced metals and plastics, reducing environmental impact. Others, like Apple, have committed to using 100% recycled rare earth elements in their iPhones.

Energy Efficiency and Renewable Power
Smartphones now feature energy-efficient processors (e.g., ARM's big.LITTLE architecture) and low-power displays (OLED/LTPO). Additionally, companies are shifting to renewable energy for production. Samsung and Google have pledged to power data centers and factories with 100% renewable energy.

Longevity and Repairability
To combat e-waste, brands are extending device lifespans through software updates (e.g., 7+ years for Google Pixel) and modular designs. The Right to Repair movement has also pushed companies like Microsoft and Apple to provide repair guides and spare parts.

E-Waste Recycling Programs
Many tech giants now offer trade-in and recycling programs, recovering valuable materials from old devices. For instance, Apple's recycling robot, Daisy, disassembles iPhones to reclaim metals, reducing mining demand.

Solar and Kinetic Charging
Innovations like solar-powered cases (e.g., Solartab) and kinetic energy chargers are emerging, reducing reliance on grid electricity. Researchers are even exploring biodegradable batteries to minimize toxic waste.
Green technology is reshaping the mobile industry, making smartphones more sustainable. As consumers, supporting eco-conscious brands and recycling old devices can drive further progress toward a greener future.

29. Look through the text and answer the question: What are modern Trends in Air Cleaning?

Modern Trends in Air Cleaning: Innovative Solutions for Healthier Air
Air pollution remains a critical global challenge, contributing to 7 million premature deaths annually (WHO). As urbanization and industrialization intensify, cutting-edge technologies and sustainable strategies are emerging to purify the air we breathe. From smart filtration to carbon capture, modern air-cleaning innovations combine AI, biotechnology, and renewable energy to combat pollution.

- AI-Powered Purifiers: Devices like Dyson Pure Cool use sensors and machine learning to detect and neutralize pollutants (PM2.5, VOCs) in real time.
- HVAC Integration: Buildings now embed MERV-13 filters and UV-C light to sterilize airflow

(e.g., Carrier's Healthy Buildings Program).
2. Carbon Capture and Utilization (CCU)
• Direct Air Capture (DAC): Plants like Climeworks' Orca in Iceland absorb CO_2 from the air and store it underground or repurpose it for fuel.
• Algae Bioreactors: Companies like Hypergiant use algae to convert CO_2 into oxygen and biomass.
3. Urban Green Infrastructure
• Smog-Eating Buildings: Coatings with titanium dioxide (e.g., Manuel Gea González Hospital, Mexico) break down pollutants when exposed to sunlight.
• Vertical Forests: Projects like Bosco Verticale (Milan) integrate thousands of plants into skyscrapers to absorb CO_2 and particulate matter.
4. Low-Emission Transportation
• EV Adoption: Electric vehicles and solar-powered charging stations reduce urban NOx and particulate emissions.
• Hydrogen-Powered Public Transit: Cities like Copenhagen deploy hydrogen buses emitting only water vapor.
5. Community and Policy Initiatives
• Air Quality Apps: Platforms like Plume Labs provide real-time pollution maps and personalized health advice.
• Global Bans on Combustion Engines: Countries like Norway and the UK plan to phase out gas/diesel cars by 2030.
Challenges and Future Innovations
• Energy Use: DAC and large-scale filters require renewable energy to stay sustainable.
• Equity: Low-income areas often lack access to advanced air-cleaning tech.
• Indoor Pollution: Rising focus on nanofiber filters and houseplants (e.g., peace lilies) to combat toxins at home.
Next-Gen Solutions:
• Nanotech Filters: Graphene-based membranes to trap ultrafine particles.
• Bioengineered Plants: Modified ivy (e.g., Neo P1) that absorbs 30% more pollutants.
From smart cities to bioreactors, modern air-cleaning trends are merging technology, nature, and policy to clear the skies. While challenges remain, these innovations offer a roadmap for a future where clean air is a universal right—not a privilege.

30. Look through the text and answer the question: What do you know about such climate phenomena as El Niño and La Niña?

El Niño and La Niña: The Climate Phenomena Shaping Our Planet
El Niño and La Niña are opposite phases of the El Niño-Southern Oscillation (ENSO) cycle - a natural climate pattern that occurs across the tropical Pacific Ocean every 2-7 years. These phenomena significantly influence global weather patterns, affecting temperature, precipitation, and extreme weather events worldwide.
1. El Niño (The Warm Phase)
• Occurs when trade winds weaken, allowing warm water to spread eastward
• Sea surface temperatures rise by 1-3°C in central/eastern Pacific
• Typically lasts 9-12 months
• More frequent and intense due to climate change (occurring every 2-3 years recently)
2. La Niña (The Cool Phase)
• Happens when trade winds strengthen, pushing warm water westward
• Cooler-than-average sea surface temperatures develop
• Often lasts 1-3 years
• Can occur consecutively ("double-dip" or "triple-dip" events)
Global Climate Impacts
El Niño Effects:
• Droughts: Southeast Asia, Australia, Southern Africa
• Floods: Western South America, Southern U.S.
• Warmer global temperatures (boosts climate change effects)
• Reduced Atlantic hurricane activity
La Niña Effects:

- Increased rainfall: Southeast Asia, Northern Australia
- Drought conditions: Southern U.S., East Africa
- More active Atlantic hurricane seasons
- Cooler global temperatures (temporarily masks climate change)

Economic and Ecological Consequences

1. Agriculture: Crop failures or surpluses depending on region
2. Fisheries: Collapse of anchovy fisheries during El Niño
3. Health: Spread of diseases (malaria, dengue) due to changing rainfall
4. Energy: Hydropower production fluctuations

Current Status and Future Outlook

- The 2023-2024 El Niño was one of strongest on record
- Climate models predict increasing frequency/intensity of both phenomena
- Scientists are improving prediction systems (up to 6-9 months in advance)
- Understanding ENSO is crucial for climate adaptation strategies

While natural phenomena, El Niño and La Niña are being modified by human-caused climate change. Their growing intensity underscores the need for better prediction systems and climate-resilient infrastructure worldwide.

31. Translate the text

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.

32. Translate the text

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 meters (443 ft) tall and the wheel has a diameter of 120 meters (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 meters (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.

33. Translate the text

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.

34. Translate the text

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 realise 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.

35. Translate the text

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36. Translate the text

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.

37. Translate the text

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.

38. Translate the text

The Foundation Period of London: Birth of a Global City (43 AD - 410 AD)
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.

39. Translate the text

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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.

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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.

42. Translate the text

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.

43. Translate the text

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.

44. Translate the text

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.

45. Translate the text

The UK Climate: Challenges and Opportunities

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.

4 семестр, Экзамен

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

Вопросы/Задания:

1. Anwer the question:

What modern city planning principles are you familiar with?

2. Answer the question:

Answer the question: What role does green infrastructure play in city planning? Can you describe it?

3. Answer the question:

How would you explain «mixed-use development» in urban planning?

4. Answer the question:

What is «transit-oriented development (TOD)» in cities?

5. Answer the question:

Would you like to live in a «smart city»? Why or why not?

6. Answer the question:

What does the principle of «affordable housing» entail?

7. Answer the question:

How would you define «overpopulation» in the context of urban planning?

8. Answer the question:

Does climate influence city planning? Discuss its role.

9. Answer the question:

Can you discuss the concept of «social equity» in urban development?

10. Answer the question:

What key features define «sustainable design» in cities?

11. Answer the question:

What modern technologies do city planners use today?

12. Answer the question:

What are the advantages of a «multi-modal transportation system» in city planning?

13. Answer the question:

Why are «efficient transportation networks» considered the backbone of urban life?

14. Answer the question:

Which urban layouts are more effective—“grid” or “radial”? Why?

15. Answer the question:

What are «last-mile solutions», and why are they important?

16. Answer the question:

What do «resilience» and «sustainability» mean in city planning?

17. Answer the question:

How do «circular economies» contribute to urban planning?

18. Answer the question:

Can you give examples of «inclusive public spaces» in cities?

19. Answer the question:

Is preserving «historical buildings» essential? What’s your view?

20. Answer the question:

What are your thoughts on the "density done right" principle in city planning?

21. Translate the text

Modern Urban Planning Principles

Urban planning has evolved significantly over the past century, reflecting changes in societal needs, technological advancements, and environmental considerations. Today’s urban planning principles aim to create sustainable, livable, and resilient cities that enhance quality of life for all residents.

One fundamental principle is Sustainable Development, which emphasizes balancing economic growth with environmental protection. Planners focus on reducing carbon footprints through green building practices, promoting renewable energy sources, and conserving natural resources. Incorporating green spaces such as parks and urban forests not only improves air quality but also provides recreational areas that foster community well-being.

Mixed-Use Development is another key principle, encouraging the integration of residential, commercial, and recreational spaces within close proximity. This approach reduces reliance on private vehicles, decreases traffic congestion, and promotes walkability. Compact urban forms support efficient public transportation systems and foster vibrant neighborhoods where residents can access amenities easily.

Transit-Oriented Development (TOD) prioritizes designing neighborhoods around accessible transit hubs. By concentrating development near transit stations, cities can promote public transportation use, reduce traffic congestion, and lower emissions. TOD also encourages higher-density development that supports local businesses and enhances social interactions.

Smart Growth principles advocate for planned growth that minimizes urban sprawl while maximizing community benefits. This includes preserving open spaces, promoting diverse housing options, and ensuring equitable access to services. Smart growth strategies aim to create inclusive communities where infrastructure investments are efficient and sustainable.

Resilience and Adaptability are increasingly vital in urban planning due to climate change and other uncertainties. Cities are adopting strategies such as flood-resistant infrastructure, flexible land use policies, and resilient building designs to withstand natural disasters and adapt to changing conditions.

Finally, Community Engagement is central to modern planning. Involving residents in decision-making processes ensures that development reflects local needs and values. Participatory planning fosters a sense of ownership among community members and leads to more equitable outcomes.

In summary, modern urban planning principles focus on creating sustainable, inclusive, and resilient cities through integrated approaches that prioritize environmental health, social equity, efficient transportation, and active community participation. These principles guide planners toward building urban environments capable of meeting present and future challenges effectively.

22. Translate the text

Mixed-Use Development in Urban Planning

Mixed-use development is a vital concept in modern urban planning that promotes the integration of residential, commercial, cultural, and recreational spaces within a single area. This approach aims to create vibrant, dynamic neighborhoods where people can live, work, and socialize without relying heavily on private vehicles. By combining different land uses in close proximity, mixed-use development enhances walkability, reduces traffic congestion, and fosters a sense of community.

One of the primary benefits of mixed-use development is its contribution to sustainable urban growth. It encourages higher density living, which makes public transportation more viable and efficient. Residents can access shops, offices, parks, and services within walking distance or short transit rides, decreasing dependence on cars and lowering greenhouse gas emissions. Additionally, mixed-use areas tend to be more economically resilient because diverse land uses attract a variety of businesses and residents.

From a social perspective, mixed-use developments promote social interaction and inclusivity. They often feature public spaces such as plazas and parks that serve as gathering spots for residents. This diversity of functions also supports local economies by providing opportunities for small businesses and entrepreneurs to thrive within the community.

Designing successful mixed-use developments requires careful planning to ensure compatibility among different uses. Zoning regulations must be flexible enough to allow for diverse building types and functions while maintaining safety and quality standards. Good urban design emphasizes pedestrian-friendly streetscapes, accessible public transportation options, and amenities that meet the needs of diverse populations.

In conclusion, mixed-use development is a cornerstone of contemporary urban planning that fosters sustainable, vibrant, and inclusive communities. By thoughtfully integrating various land uses within neighborhoods, cities can improve quality of life for residents while promoting environmental sustainability and economic vitality.

23. Translate the text

Green Infrastructure in Urban Planning

Green infrastructure is an innovative approach in urban planning that emphasizes the integration of natural systems into city landscapes to enhance environmental quality, resilience, and quality of life. Unlike traditional gray infrastructure, which relies on concrete and pipes, green infrastructure uses natural elements such as parks, green roofs, wetlands, and tree-lined streets to manage stormwater, improve air quality, reduce urban heat islands, and support biodiversity.

One of the key benefits of green infrastructure is its ability to mitigate flooding and water

management issues. By incorporating permeable surfaces and vegetated areas, cities can absorb rainwater more effectively, reducing runoff and preventing overwhelmed drainage systems during heavy storms. Urban wetlands and rain gardens serve as natural filters, improving water quality before it reaches rivers or lakes.

Green spaces also play a crucial role in combating the urban heat island effect—where cities experience higher temperatures due to dense development and lack of vegetation. Trees, parks, and green roofs provide shade and cooling effects that help lower temperatures, making cities more comfortable during heatwaves. Additionally, these areas offer recreational opportunities and promote mental well-being for residents.

Beyond environmental benefits, green infrastructure supports social cohesion by creating accessible public spaces that foster community interaction. It also enhances urban biodiversity by providing habitats for birds, insects, and other wildlife within city environments.

Implementing green infrastructure requires thoughtful planning and collaboration among urban designers, ecologists, policymakers, and communities. It involves integrating natural elements into existing urban fabric while ensuring accessibility and functionality. As cities face increasing challenges from climate change and population growth, green infrastructure offers a sustainable solution that promotes resilience while enriching urban life.

In summary, green infrastructure is a vital component of modern urban planning that leverages natural systems to create healthier, more sustainable cities. Its multifaceted benefits—from flood control to improved air quality—make it an essential strategy for building resilient urban environments for future generations.

24. Translate the text

Transit-Oriented Development (TOD) in City Planning

Transit-Oriented Development (TOD) is a strategic approach in urban planning that focuses on creating compact, walkable communities centered around high-quality public transportation hubs such as train stations, bus terminals, or light rail stops. The goal of TOD is to encourage the use of public transit, reduce reliance on private vehicles, and promote sustainable urban growth.

By designing neighborhoods with mixed-use buildings—residential, commercial, and recreational spaces—around transit stations, TOD fosters vibrant communities where residents can easily access work, shopping, and leisure activities without long car commutes. This approach not only decreases traffic congestion and vehicle emissions but also enhances accessibility for people of all ages and income levels.

Key principles of TOD include high-density development near transit nodes to maximize land use efficiency, pedestrian-friendly street designs that prioritize safety and comfort, and a variety of housing options to accommodate diverse populations. Integrating public spaces and amenities further encourages community interaction and social cohesion.

Implementing TOD requires coordinated planning among city officials, transportation agencies, developers, and local communities. Effective zoning policies are essential to support higher densities and mixed uses near transit hubs. Additionally, investments in reliable and frequent transit services are critical to making TOD successful.

Overall, Transit-Oriented Development offers a sustainable pathway toward more livable cities by reducing environmental impacts, improving mobility options, and fostering inclusive communities. As urban areas continue to grow, TOD provides a practical framework for shaping cities that are accessible, efficient, and environmentally responsible.

25. Translate the text

Smart Cities: Shaping the Future of Urban Living

Smart cities represent a transformative approach to urban development that leverages advanced technology, data analytics, and innovative infrastructure to improve the quality of life for residents, enhance sustainability, and optimize city operations. By integrating digital solutions into everyday urban functions, smart cities aim to create more efficient, responsive, and sustainable environments.

At the core of smart city initiatives are interconnected systems such as intelligent transportation networks, energy management platforms, waste management solutions, and public safety services. These systems collect real-time data through sensors, IoT devices, and communication networks to

monitor city conditions continuously. This data-driven approach enables city officials to make informed decisions, respond swiftly to issues, and plan future developments more effectively.
One of the key benefits of smart cities is improved mobility. Intelligent traffic management reduces congestion through adaptive signaling and real-time transit updates, making transportation safer and more efficient. Additionally, smart grids optimize energy consumption, reducing costs and environmental impact by integrating renewable sources and promoting energy efficiency.
Smart cities also prioritize citizen engagement by providing digital platforms for feedback, service requests, and community participation. This fosters transparency and inclusivity while ensuring that urban services meet residents' needs. Moreover, innovations in areas like healthcare, education, and public safety contribute to a higher standard of living.
However, developing smart cities requires addressing challenges such as data privacy concerns, cybersecurity risks, infrastructure costs, and ensuring equitable access to technology. Successful implementation depends on collaboration among government agencies, private sector partners, technologists, and communities.
In conclusion, smart cities hold the promise of creating more sustainable, efficient, and livable urban environments by harnessing technology and data. As urban populations grow worldwide, adopting smart city principles will be essential for building resilient cities capable of meeting future challenges while enhancing the well-being of their inhabitants.

26. Translate the text

Affordable Housing: A Key to Inclusive Urban Development
Affordable housing is a fundamental component of sustainable and equitable urban development. It refers to housing that is affordable to households with low to moderate incomes, ensuring that residents do not spend an excessive portion of their income—typically no more than 30%—on housing costs. Access to affordable housing is essential for reducing poverty, promoting social inclusion, and fostering healthy communities.
The shortage of affordable housing is a global challenge, driven by rapid urbanization, rising property prices, and limited supply. Without adequate affordable options, many families face overcrowding, homelessness, or are forced to live far from employment centers, which increases commute times and reduces quality of life. Addressing this issue requires a multifaceted approach that includes policy interventions, innovative financing mechanisms, and community engagement.
Governments often play a vital role by implementing policies such as rent controls, subsidies, tax incentives for developers, and inclusionary zoning—requiring a portion of new developments to be designated as affordable units. Public-private partnerships can also stimulate the construction of affordable homes by leveraging private investment. Additionally, promoting alternative housing models like cooperative housing or modular construction can help reduce costs and increase supply.
Ensuring access to affordable housing not only benefits individuals and families but also strengthens local economies by attracting diverse residents and supporting workforce stability. Moreover, well-designed affordable housing can contribute to neighborhood revitalization and social cohesion.
In conclusion, providing adequate affordable housing is crucial for creating inclusive cities where all residents have the opportunity to thrive. It requires coordinated efforts among policymakers, developers, communities, and stakeholders committed to building equitable urban environments that meet the needs of diverse populations now and in the future.

27. Translate the text

Overpopulation in City Planning: Challenges and Strategies
Overpopulation in urban areas occurs when the number of residents exceeds the capacity of a city's infrastructure, services, and resources to support them effectively. This phenomenon presents significant challenges for city planners, policymakers, and communities, as it can lead to overcrowded neighborhoods, strained public services, increased pollution, traffic congestion, and inadequate housing.
The rapid influx of people into cities often results from rural-to-urban migration driven by economic opportunities, better amenities, and employment prospects. While urbanization can stimulate economic growth and innovation, unchecked overpopulation can compromise quality of life and threaten sustainable development.
To address overpopulation issues, city planning must adopt comprehensive strategies. These include

promoting balanced regional development to disperse growth more evenly across surrounding areas, investing in expanding and upgrading infrastructure such as transportation, water supply, and sanitation systems. Implementing effective land-use policies that encourage vertical growth through high-density housing can maximize limited space while preserving green areas.

Additionally, fostering affordable housing options helps prevent informal settlements or slums from proliferating. Enhancing public transportation reduces traffic congestion and pollution by decreasing reliance on private vehicles. Urban planners also focus on creating resilient communities with access to healthcare, education, and employment opportunities.

Long-term solutions involve integrating sustainable development principles that prioritize environmental conservation, social equity, and economic vitality. Engaging communities in planning processes ensures that growth aligns with residents' needs and aspirations.

In summary, managing overpopulation in city planning requires proactive measures to balance growth with sustainability. By implementing strategic policies and investments, cities can accommodate increasing populations while maintaining livability and resilience for future generations.

28. Translate the text

Climate Adaptation in City Planning

Climate adaptation in city planning refers to the strategic efforts to prepare urban areas for the impacts of climate change, such as rising temperatures, increased flooding, sea-level rise, and extreme weather events. As cities are particularly vulnerable to climate-related risks due to dense populations and extensive infrastructure, integrating adaptation measures into urban development is essential for building resilient communities.

Effective climate adaptation involves assessing local vulnerabilities and implementing solutions that reduce risks while enhancing the city's capacity to cope with changing conditions. This can include designing flood-resistant infrastructure like levees, green roofs, and permeable pavements that absorb stormwater. Urban planners also prioritize the preservation and expansion of green spaces, which help mitigate heat islands and improve air quality.

In addition, city planning strategies may involve elevating buildings in flood-prone areas, creating buffer zones along coastlines, and updating zoning laws to restrict development in high-risk zones. Incorporating climate resilience into transportation systems—such as resilient roads and transit networks—ensures mobility during extreme weather events.

Community engagement is vital in climate adaptation efforts, ensuring that vulnerable populations are protected and that local knowledge informs planning decisions. Moreover, integrating climate adaptation with broader sustainability initiatives promotes a holistic approach to urban resilience.

Ultimately, proactive climate adaptation in city planning not only minimizes potential damages but also creates healthier, more sustainable urban environments. As climate change accelerates globally, cities that prioritize adaptive strategies will be better equipped to safeguard their residents and infrastructure for the future.

29. Translate the text

Social Equity in Urban Planning

Social equity in urban planning focuses on creating inclusive cities where all residents have fair access to resources, opportunities, and services regardless of their socioeconomic status, race, age, gender, or background. It aims to reduce disparities and ensure that urban development benefits everyone, especially marginalized and vulnerable populations.

Achieving social equity involves thoughtful policies and practices that address historical inequalities and promote equitable distribution of housing, transportation, education, healthcare, and employment opportunities. For example, planners may prioritize affordable housing in diverse neighborhoods, improve public transit access in underserved areas, and involve community members in decision-making processes to ensure their voices are heard.

Inclusive urban planning also considers the needs of marginalized groups such as low-income families, seniors, people with disabilities, and minority communities. Designing accessible infrastructure—like wheelchair-friendly sidewalks or multilingual public information—helps remove barriers to participation and mobility.

Furthermore, fostering social equity contributes to stronger communities by promoting social cohesion, reducing crime rates, and enhancing overall quality of life. It encourages mixed-use developments that support diverse populations and creates public spaces where residents can interact and build connections.

Incorporating social equity into urban planning requires collaboration among government agencies, community organizations, developers, and residents. It also involves ongoing assessment to ensure that development initiatives do not inadvertently widen existing inequalities.

In summary, prioritizing social equity in urban planning is essential for building just, resilient cities where everyone has the opportunity to thrive. By addressing disparities and promoting inclusivity, cities can foster sustainable growth that benefits all members of society.

30. Translate the text

Sustainable Design: Building for the Future

Sustainable design, also known as eco-design or green design, focuses on creating products, buildings, and environments that meet present needs without compromising the ability of future generations to meet theirs. It emphasizes harmony with the natural environment, resource efficiency, and social responsibility throughout the design process.

In architecture and urban planning, sustainable design involves using environmentally friendly materials, maximizing energy efficiency, and incorporating renewable energy sources such as solar or wind power. It promotes features like natural lighting, passive heating and cooling, green roofs, and water conservation systems to reduce environmental impact and operational costs.

Beyond environmental considerations, sustainable design also prioritizes social and economic factors. This includes creating healthy indoor environments with good air quality, accessible public spaces, and designs that support community well-being. Additionally, it encourages the use of local materials and labor to boost local economies and reduce transportation emissions.

Implementing sustainable design principles helps mitigate climate change by lowering greenhouse gas emissions and conserving natural resources. It also enhances resilience against environmental challenges such as extreme weather events by promoting adaptable and durable structures.

Overall, sustainable design is a holistic approach that integrates ecological integrity with human needs. By adopting sustainable practices in development projects, architects, planners, and designers contribute to healthier ecosystems, more livable communities, and a more sustainable future for all.

31. Translate the text

Modern Technologies in Urban Planning

Modern technologies are transforming urban planning by enabling more efficient, data-driven, and innovative approaches to designing and managing cities. These advancements help planners address complex challenges such as traffic congestion, environmental sustainability, housing shortages, and disaster resilience.

One of the key technologies is Geographic Information Systems (GIS), which allows for detailed mapping and spatial analysis. GIS helps planners visualize land use patterns, identify development opportunities, and assess environmental impacts. Coupled with remote sensing and satellite imagery, GIS provides real-time data that supports informed decision-making.

Building Information Modeling (BIM) is another revolutionary tool that creates detailed digital models of buildings and infrastructure. BIM facilitates collaboration among architects, engineers, and contractors, improving design accuracy and construction efficiency while reducing costs and waste.

Smart city technologies leverage the Internet of Things (IoT) to connect devices and systems within urban environments. Sensors monitor traffic flow, air quality, energy consumption, and public safety in real time, enabling adaptive management of city services. For example, intelligent traffic lights can optimize flow based on current conditions, reducing congestion and emissions.

Data analytics and artificial intelligence (AI) further enhance urban planning by predicting future trends, optimizing resource allocation, and supporting sustainable development goals. Virtual reality (VR) and augmented reality (AR) tools also allow stakeholders to visualize proposed projects interactively, fostering community engagement.

Overall, integrating modern technologies into urban planning leads to smarter, more sustainable cities that are better equipped to meet the needs of their residents while minimizing environmental

impact. As technology continues to evolve, its role in shaping resilient and innovative urban environments will only grow stronger.

32. Translate the text

Principles of City Planning: Building Livable, Sustainable, and Resilient Urban Spaces

Effective city planning is essential for creating urban environments that are livable, sustainable, and resilient. These principles guide planners and policymakers in designing cities that meet the diverse needs of residents while protecting the environment and preparing for future challenges.

«Livability» emphasizes creating spaces that promote health, safety, comfort, and social interaction. This involves designing accessible public transportation, green spaces, pedestrian-friendly streets, affordable housing, and community amenities. Prioritizing mixed-use development encourages vibrant neighborhoods where people can live, work, and play without long commutes.

«Sustainability» focuses on minimizing environmental impact through resource-efficient practices. This includes promoting energy-efficient buildings, renewable energy use, water conservation, waste reduction, and preserving natural ecosystems within urban areas. Sustainable city planning also encourages compact development to reduce urban sprawl and protect surrounding rural landscapes.

«Resilience» involves preparing cities to withstand and recover from natural disasters, climate change impacts, and other disruptions. Key strategies include implementing flood defenses, designing resilient infrastructure, diversifying transportation options, and incorporating climate-adaptive features into urban design. Building resilient communities ensures safety and continuity in the face of adversity.

Integrating these principles requires a holistic approach that balances economic growth with social equity and environmental stewardship. Engaging communities in planning processes ensures that development reflects local needs and values.

In conclusion, by adhering to the principles of livability, sustainability, and resilience, city planners can create urban spaces that are not only functional but also enriching places where residents can thrive now and in the future.

33. Translate the text

5–15 Minute Neighborhoods Principle

The 5–15 minute neighborhood principle is a concept in urban planning that aims to create compact, walkable communities where residents can access most of their daily needs within a short walk or bike ride—typically five to fifteen minutes. This approach promotes sustainable, healthy, and vibrant urban environments by reducing dependence on cars and encouraging active lifestyles.

Key features of 5–15 minute neighborhoods include mixed-use development that combines residential, commercial, educational, healthcare, and recreational facilities in close proximity. This integration fosters convenience, social interaction, and economic vitality within the community. Safe and accessible sidewalks, bike lanes, public transit options, and public spaces are essential components that support mobility and community engagement.

Implementing this principle helps address several urban challenges: it reduces traffic congestion and air pollution by decreasing vehicle trips; promotes physical activity and healthier lifestyles; enhances social cohesion by encouraging neighborhood interactions; and supports local businesses through increased foot traffic.

Achieving 5–15 minute neighborhoods requires thoughtful land use planning, zoning policies that favor density and diversity, and investments in infrastructure that prioritize pedestrians and cyclists. Community involvement is also vital to ensure developments meet residents' needs and preserve local character.

In summary, the 5–15 minute neighborhood principle fosters sustainable, inclusive, and resilient communities where residents enjoy greater convenience, improved quality of life, and a stronger sense of belonging—all within a short distance from home.

34. Translate the text

Multi-Modal Systems

Multi-modal systems refer to integrated transportation networks that utilize multiple modes of transit—such as walking, cycling, public transit, driving, and shared mobility options—to provide seamless and efficient mobility for users. The goal of multi-modal systems is to offer convenient,

sustainable, and flexible transportation choices that meet diverse needs while reducing reliance on single-occupancy vehicles.

By connecting different modes through coordinated planning, infrastructure, and technology, multi-modal systems enable travelers to switch easily between walking, biking, buses, trains, and ride-sharing services. This integration improves accessibility, shortens travel times, and enhances the overall user experience.

Key features of effective multi-modal systems include well-designed transit hubs, synchronized schedules, real-time information apps, safe pedestrian pathways, dedicated bike lanes, and accessible infrastructure for people with disabilities. These elements encourage more people to choose sustainable options over private car use.

Implementing multi-modal transportation benefits cities by reducing traffic congestion, lowering greenhouse gas emissions, improving air quality, and promoting healthier lifestyles. It also supports economic development by increasing access to jobs and services across urban areas.

Successful deployment requires collaboration among city planners, transportation agencies, technology providers, and communities. Policies that incentivize public transit use and active transportation are essential to fostering a balanced and resilient mobility network.

In summary, multi-modal systems are vital for creating sustainable urban environments—offering diverse transportation options that enhance mobility, reduce environmental impact, and improve quality of life for residents.

35. Translate the text

Efficient Transportation Networks

Efficient transportation networks are vital for the smooth functioning of urban and regional areas, enabling the movement of people and goods in a timely, safe, and sustainable manner. An effective network integrates various modes of transit—such as public transit, cycling, walking, and private vehicles—through well-planned infrastructure, coordinated schedules, and smart technology.

Key features of efficient transportation systems include high-capacity public transit options like buses, trains, and subways that reduce congestion and emissions. These systems are often complemented by dedicated bike lanes, pedestrian pathways, and last-mile connectivity solutions to promote active transportation. Additionally, intelligent traffic management systems utilizing real-time data help optimize traffic flow, reduce delays, and improve safety.

Designing efficient networks also involves strategic land use planning to minimize travel distances and encourage mixed-use developments that bring workplaces, homes, and amenities closer together. This reduces dependence on private cars and supports sustainable urban growth.

The benefits of efficient transportation networks are numerous: they enhance economic productivity by reducing travel time; improve air quality; lower greenhouse gas emissions; increase accessibility for all residents—including those with mobility challenges—and contribute to overall quality of life.

Achieving such efficiency requires collaboration among government agencies, private sector partners, urban planners, and communities. Investment in infrastructure upgrades, innovative technologies like mobility-as-a-service (MaaS), and policies promoting sustainable travel choices are essential components.

In summary, efficient transportation networks are the backbone of resilient cities—they facilitate mobility while supporting environmental sustainability and social equity for a healthier future.

36. Translate the text

Grid vs. Radial Layouts in Urban Planning

In urban planning and city design, two common street network patterns are the grid layout and the radial layout. Each has distinct characteristics, advantages, and challenges that influence mobility, accessibility, and the overall character of a city.

«Grid Layout»

The grid layout features streets arranged in a regular, rectangular pattern with intersecting perpendicular roads. This design promotes uniformity, easy navigation, and multiple route options for travelers. Grid systems facilitate efficient movement, reduce congestion by dispersing traffic, and provide excellent connectivity across neighborhoods.

Advantages of grid layouts include straightforward wayfinding, increased accessibility for pedestrians and cyclists, and flexibility for future development or modifications. Cities like New

York and Chicago exemplify the effectiveness of grid systems.
However, grids can sometimes lead to higher traffic volumes on main streets, potential congestion at intersections, and a less scenic or unique urban environment if not carefully designed.
«Radial Layout»
Radial layouts are characterized by streets that emanate outward from a central point or core—such as a city center or landmark—forming spokes connected by concentric rings or ring roads. This pattern emphasizes movement toward the center and can create dramatic vistas and focal points.
Radial designs are effective for directing traffic flow toward key destinations, supporting centralized urban functions like business districts or cultural hubs. They often foster a sense of grandeur and identity around the city's core.
On the downside, radial networks can lead to congestion at central nodes, limited alternative routes for peripheral areas, and potential difficulties in expanding or connecting outer neighborhoods efficiently.
«Choosing Between Them»
Many cities incorporate elements of both layouts to balance connectivity with aesthetic appeal. The choice depends on factors such as geography, historical development, urban goals, and transportation needs.
In summary, understanding the strengths and limitations of grid versus radial layouts helps planners design cities that optimize mobility, accessibility, and urban experience—creating functional yet vibrant environments for residents and visitors alike.

37. Translate the text

Last-Mile Solutions
Last-mile solutions refer to the innovative transportation options and infrastructure designed to bridge the gap between major transit hubs and individual destinations, such as homes, workplaces, or commercial centers. This final leg of a journey is often the most challenging and costly part of urban mobility, making effective last-mile solutions essential for creating seamless, efficient, and sustainable transportation systems.
Common last-mile options include shared bikes and e-scooters, on-demand shuttles, ride-hailing services, walking paths, and micro-mobility devices. Cities are increasingly integrating these solutions with public transit networks through well-designed stations, real-time information apps, and flexible service models to encourage users to choose sustainable modes over private cars.
The benefits of effective last-mile solutions are significant: they improve accessibility for residents in underserved areas, reduce traffic congestion and emissions by decreasing reliance on private vehicles, and enhance overall mobility convenience. They also support economic activity by making it easier for people to reach businesses and services.
Implementing successful last-mile strategies requires collaboration among transportation agencies, technology providers, urban planners, and communities. Investments in infrastructure—such as dedicated bike lanes or pedestrian-friendly pathways—and innovative policies that incentivize shared mobility are key to expanding these options.
In summary, last-mile solutions play a crucial role in creating integrated, sustainable urban transportation systems—making cities more accessible, environmentally friendly, and user-centric for all residents.

38. Translate the text

Sustainability & Resilience
Sustainability and resilience are two fundamental concepts in urban planning, environmental management, and community development that aim to create healthier, more adaptable, and enduring cities and ecosystems.
«Sustainability» refers to the ability to meet present needs without compromising the ability of future generations to meet their own needs. It emphasizes responsible use of resources, reducing environmental impact, and promoting social equity and economic viability. Sustainable practices include renewable energy adoption, efficient water and waste management, green building design, and preserving natural habitats within urban areas.
«Resilience», on the other hand, focuses on a system's capacity to anticipate, withstand, recover

from, and adapt to shocks and stresses such as natural disasters, climate change impacts, economic downturns, or social upheavals. Resilient cities are designed to absorb disruptions with minimal damage and quickly bounce back. This involves robust infrastructure, flexible land use planning, community engagement, and adaptive governance.

Together, sustainability and resilience form a comprehensive approach to creating urban environments that are not only environmentally responsible but also capable of handling unforeseen challenges. For example, integrating green infrastructure like parks and permeable surfaces enhances stormwater management (sustainability) while also reducing flood risks (resilience). Similarly, diversifying energy sources supports sustainable development while ensuring energy security during crises.

In conclusion, prioritizing both sustainability and resilience is essential for building cities that are livable today and prepared for the uncertainties of tomorrow—ensuring long-term well-being for communities and the planet.

39. Translate the text

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Sustainability and resilience are two fundamental concepts in urban planning, environmental management, and community development that aim to create healthier, more adaptable, and enduring cities and ecosystems.

“Sustainability” refers to the ability to meet present needs without compromising the ability of future generations to meet their own needs. It emphasizes responsible use of resources, reducing environmental impact, and promoting social equity and economic viability. Sustainable practices include renewable energy adoption, efficient water and waste management, green building design, and preserving natural habitats within urban areas.

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In conclusion, prioritizing both sustainability and resilience is essential for building cities that are livable today and prepared for the uncertainties of tomorrow—ensuring long-term well-being for communities and the planet.

40. Translate the text

Circular Economies

A circular economy is an innovative economic model aimed at minimizing waste and maximizing the reuse, recycling, and regeneration of resources. Unlike the traditional linear economy—characterized by a "take-make-dispose" approach—a circular economy seeks to create a closed-loop system where products, materials, and resources are kept in use for as long as possible.

The core principles of a circular economy include designing products for durability and reparability, encouraging reuse and sharing, promoting recycling and remanufacturing, and reducing resource extraction. This approach not only helps conserve natural resources but also reduces environmental impacts such as pollution and greenhouse gas emissions.

Implementing a circular economy involves rethinking business models, fostering innovation in product design, and developing infrastructure for recycling and material recovery. Companies are increasingly adopting practices like product-as-a-service, where consumers lease rather than own products, and designing for easy disassembly to facilitate recycling.

The benefits of transitioning to a circular economy are substantial: it can lead to economic growth through new business opportunities, create jobs in recycling and remanufacturing sectors, enhance resource security, and contribute to environmental sustainability.

In summary, a circular economy offers a sustainable pathway toward reducing waste and conserving resources while supporting economic development. Embracing this model is essential for building resilient societies that can thrive within the planet's ecological limits.

41. Read the text and describe Barcelona's superblocks

Barcelona's Superblocks

Barcelona's innovative urban initiative, known as "Superblocks" (or "Superilles" in Catalan), aims to transform the city into a more sustainable, livable, and pedestrian-friendly environment. The concept involves reorganizing city blocks to reduce traffic, prioritize pedestrians and cyclists, and create vibrant public spaces.

In a typical superblock, several city blocks are combined into a larger unit where through-traffic is restricted or limited to local residents and deliveries. This significantly decreases vehicle congestion and pollution within these zones. The freed-up space is then repurposed for parks, playgrounds, seating areas, bike lanes, and community activities, fostering social interaction and improving air quality.

Barcelona's superblocks promote several key benefits: they enhance urban health by reducing emissions and noise; increase green spaces for recreation and biodiversity; improve safety for pedestrians and cyclists; and encourage local commerce by making neighborhoods more attractive and accessible. Additionally, they help combat urban heat islands by increasing tree cover and green infrastructure.

Implementing superblocks requires careful planning, community engagement, and collaboration among city officials, residents, and businesses. The initiative aligns with Barcelona's broader goals of sustainable development, climate resilience, and social inclusion.

Overall, Barcelona's superblocks exemplify a forward-thinking approach to urban design—reimagining city spaces to prioritize people over cars and creating more equitable, healthy, and enjoyable urban environments for all residents.

42. Read the text on Copenhagen's Bike Lanes. What principle do they exemplify?

Copenhagen is renowned worldwide for its extensive and well-designed bike lane network, making cycling a central part of the city's transportation system. The city's commitment to promoting sustainable mobility has transformed it into one of the most bike-friendly cities globally, with over 60% of residents commuting by bike daily.

The bike lanes in Copenhagen are characterized by their safety, connectivity, and infrastructure quality. Dedicated, physically separated lanes run throughout the city, often featuring raised curbs or barriers that protect cyclists from motor vehicle traffic. These lanes are complemented by numerous bike bridges, intersections designed for cyclist priority, and ample bike parking facilities.

This comprehensive cycling infrastructure encourages residents and visitors to choose biking over driving, reducing traffic congestion and lowering carbon emissions. The city's approach also includes integrating bike lanes with public transit hubs, making multi-modal travel seamless and convenient.

Copenhagen's investment in cycling infrastructure has fostered a culture of biking that promotes health, environmental sustainability, and social equity. The city continuously innovates by expanding its network, improving signage, and implementing smart traffic management systems to ensure safety and efficiency.

Overall, Copenhagen's bike lanes exemplify successful urban planning that prioritizes active transportation. Their design not only enhances mobility but also contributes to creating a cleaner, healthier, and more livable city for all residents.

43. Read the text and describe Manhattan's street grid system.

Manhattan's Grid

Manhattan's street grid is one of the most iconic and influential urban planning designs in the world. Developed in the 19th century, the grid system features a precise, rectangular pattern of streets and avenues that cover the borough's island, facilitating navigation, development, and land use.

The grid was officially laid out in 1811 through the Commissioners' Plan, which established numbered streets running east-west and avenues running north-south. This systematic approach created uniform blocks, making it easier to subdivide land, build infrastructure, and promote real estate development. The grid's simplicity and regularity have contributed to Manhattan's reputation

for ease of navigation and efficient movement.
Advantages of Manhattan's grid include high connectivity, straightforward wayfinding, and flexibility for transportation modes such as walking, cycling, and public transit. The grid also supports dense development patterns that accommodate millions of residents and workers within a relatively small area.
However, the grid can sometimes lead to traffic congestion on major avenues and a lack of variation in urban form. Despite this, it has become a defining feature of New York City's identity—supporting vibrant neighborhoods, commercial hubs, and cultural districts.
Overall, Manhattan's grid exemplifies how a well-planned street network can shape a city's growth, accessibility, and character—making it a model studied and admired worldwide.

44. Read the text and discuss Paris's radial design

Paris's Radial Design
Paris is renowned for its distinctive radial urban layout, characterized by wide, sweeping boulevards that radiate outward from the historic city center around the Île de la Cité. This design was largely developed during the extensive renovations led by Baron Haussmann in the mid-19th century, transforming the city into a more organized, accessible, and aesthetically appealing metropolis.
The radial pattern features major avenues that extend from central points such as Place de l'Étoile (where the Arc de Triomphe is located) and connect to various neighborhoods and suburbs. These radiating streets facilitate movement toward key landmarks, government buildings, and cultural sites, creating a sense of grandeur and order.
Advantages of Paris's radial layout include efficient traffic flow toward central hubs, improved sightlines and vistas, and a cohesive urban identity. The broad boulevards also serve as social spaces for parades, protests, and public gatherings, enhancing civic life.
However, this design can lead to congestion at central nodes and may limit direct routes for some peripheral areas. Despite these challenges, Paris's radial plan has contributed to its reputation as a city of elegance, accessibility, and historical significance.
In summary, Paris's radial street network exemplifies how strategic urban planning can shape a city's character—balancing functionality with beauty—and continues to influence city design worldwide.

45. Read the text and discuss last-mile solutions

Last-Mile Solutions in Urban Planning: The Example of Los Angeles
In urban planning, last-mile solutions are strategies and infrastructure designed to connect transit hubs with final destinations, enhancing overall mobility and reducing reliance on private vehicles. Los Angeles, a sprawling city known for its car dependency, has increasingly focused on innovative last-mile solutions to improve accessibility and promote sustainable transportation.
Los Angeles has implemented several initiatives to address the last-mile challenge. The city has expanded its network of bike lanes and bike-sharing programs, making it easier for residents to travel short distances from transit stations to their homes or workplaces. Additionally, LA has introduced on-demand shuttle services and micro-mobility options like e-scooters and e-bikes that can be easily accessed via mobile apps, providing flexible and convenient connections from transit stops.
The city's investment in transit-oriented development (TOD) around major transit stations—such as Metro Rail stations—aims to create walkable neighborhoods with mixed-use developments, reducing the need for long car trips. Furthermore, LA's efforts include improving pedestrian infrastructure with wider sidewalks, better lighting, and crosswalks to encourage walking as a viable last-mile option.
Unfortunately, these strategies have resulted in sprawl of the transportation system and not helped Los Angeles reduce traffic congestion, lower emissions, and increase transit ridership by making it easier for residents to complete their journeys without relying solely on private cars. The integration of technology, infrastructure improvements, and urban design exemplifies how LA has failed addressing last-mile challenges within its broader urban planning framework.
In summary, Los Angeles's approach to last-mile solutions demonstrates how cities should not use transportation modes and smart planning to create more accessible, sustainable, and connected urban environments.

46. Read the text and describe sponge cities

Sponge Cities in China

Sponge cities are an innovative urban development concept aimed at improving water management, reducing flooding, and enhancing ecological resilience. In China, the sponge city initiative has gained significant attention as a response to rapid urbanization, climate change, and increasing instances of urban flooding.

The core idea of a sponge city is to design urban areas that can absorb, store, and purify rainwater like a sponge. This involves integrating green infrastructure such as permeable pavements, green roofs, wetlands, rain gardens, and natural water bodies into city planning. These features help to slow down runoff, promote groundwater recharge, and reduce the burden on traditional drainage systems.

China launched the sponge city pilot program in 2015, selecting several cities—including Wuhan, Chengdu, and Shenzhen—to develop comprehensive water management strategies. The goal is to create urban environments that can handle heavy rainfall events without flooding while also improving water quality and supporting biodiversity.

The benefits of sponge cities include mitigating flood risks, reducing urban heat islands through increased greenery, conserving water resources, and enhancing overall urban livability. Moreover, this approach aligns with China's broader goals of sustainable development and environmental protection.

In summary, China's sponge city initiative exemplifies innovative urban planning aimed at creating resilient cities capable of adapting to climate challenges while promoting ecological health and sustainable water management.

47. Read the text and describe Inclusive Public Spaces

Inclusive public spaces are environments designed to be accessible, welcoming, and usable by all members of society, regardless of age, ability, gender, socioeconomic status, or cultural background. These spaces play a vital role in fostering social interaction, community cohesion, and a sense of belonging.

Creating inclusive public spaces involves thoughtful urban design that considers diverse needs. This includes ensuring physical accessibility for people with disabilities through features like ramps, tactile paving, and accessible seating. It also involves providing safe and comfortable environments for children, the elderly, and marginalized groups. Additionally, inclusive spaces incorporate elements such as varied seating options, shade, lighting, and signage that cater to different preferences and needs.

Beyond physical design, inclusivity also encompasses social aspects—encouraging diverse participation and ensuring that the space reflects the cultural and social fabric of the community. Programming events and activities that engage different groups further enhance inclusivity.

The benefits of inclusive public spaces are profound. They promote social equity by reducing barriers to participation, foster community interactions across diverse populations, and contribute to mental well-being by offering accessible areas for relaxation and recreation.

In summary, inclusive public spaces are essential for building equitable cities where everyone can enjoy shared environments that support connection, diversity, and social harmony. Designing with inclusivity at the core helps create vibrant communities where all individuals feel valued and empowered.

48. Read the text and describe Heritage Preservation in City Planning

Heritage preservation in city planning involves protecting, conserving, and integrating historical sites, buildings, landscapes, and cultural landmarks within the urban fabric. It aims to maintain a city’s unique identity, sense of place, and cultural continuity while accommodating modern development needs.

Incorporating heritage preservation into urban planning requires a balanced approach that values both the preservation of historical assets and the creation of vibrant, functional cities. This can involve designating protected areas or districts, implementing regulations that restrict inappropriate modifications, and promoting adaptive reuse—transforming historic structures for contemporary uses without compromising their integrity.

Effective heritage preservation enhances a city’s aesthetic appeal, attracts tourism, and fosters community pride. It also provides educational opportunities by showcasing architectural styles,

historical events, and cultural traditions. Moreover, preserving heritage sites can contribute to sustainable development by reducing the environmental impact associated with new construction.
City planners often collaborate with conservation experts, local communities, and stakeholders to identify significant heritage assets and develop strategies that integrate them seamlessly into urban growth. This may include creating buffer zones, providing incentives for preservation efforts, and ensuring accessibility while respecting the site's historical significance.
In summary, heritage preservation in city planning is essential for maintaining a city's cultural identity and enriching urban environments. Thoughtful integration of historic elements ensures that cities remain vibrant places where history and modern life coexist harmoniously.

49. Read the text and describe Istanbul's Galata Renewal approach

The Galata neighborhood in Istanbul, renowned for its historic charm and vibrant cultural scene, has undergone significant renewal efforts aimed at revitalizing its urban fabric while preserving its rich heritage. Located in the Beyoğlu district, Galata is famous for landmarks such as the Galata Tower, historic streets, and diverse architectural styles that reflect its multicultural past.
The renewal initiatives in Galata focus on balancing preservation with modern development. Urban planners and conservationists have worked to restore historic buildings, improve infrastructure, and enhance public spaces to make the area more accessible and attractive to residents, visitors, and local businesses. These efforts include renovating traditional facades, upgrading pedestrian pathways, and creating cultural hubs that celebrate the neighborhood's artistic and historical identity.
A key aspect of Galata's renewal is promoting sustainable tourism that respects the area's cultural significance. By maintaining its authentic character while introducing contemporary amenities, the project aims to boost local economy and community vitality without compromising heritage values.
Community involvement has been central to the renewal process, ensuring that residents and stakeholders have a voice in shaping the neighborhood's future. The goal is to foster a lively, inclusive environment where history coexists with modern urban life.
In summary, Istanbul's Galata renewal exemplifies a thoughtful approach to urban regeneration—preserving its historic essence while embracing sustainable development—ensuring that this iconic neighborhood remains a vibrant symbol of Istanbul's cultural legacy for generations to come.

50. Read the text and describe the density done right principle in city planning

Density Done Right: Principles in City Planning
The "Density Done Right" principle emphasizes that increasing urban density can be a sustainable, livable, and vibrant approach to city planning when implemented thoughtfully. Rather than simply focusing on building taller or more numerous structures, this concept advocates for strategic density that enhances quality of life, promotes efficient land use, and supports environmental goals.
Key principles of Density Done Right include:
1. "Mixed-Use Development" : Combining residential, commercial, cultural, and recreational spaces encourages vibrant neighborhoods where people can live, work, and socialize without long commutes. This diversity fosters economic vitality and social interaction.
2. "Accessible Public Transit and Infrastructure": High-density areas should be well-connected through reliable public transportation, walkable streets, and cycling infrastructure. This reduces reliance on private vehicles, lowers emissions, and improves mobility.
3. "Human-Scale Design": Ensuring buildings and public spaces are designed to prioritize pedestrian comfort and safety creates inviting environments. This includes appropriate building heights, street furniture, green spaces, and accessible amenities.
4. "Preservation of Open Spaces": Even in dense neighborhoods, integrating parks, plazas, and green corridors is essential for recreation, ecological health, and mental well-being.
5. "Community Engagement": Involving residents in planning processes ensures that density increases meet local needs and preserve neighborhood character.
When applied correctly, Density Done Right can lead to more sustainable cities with reduced urban sprawl, improved resource efficiency, and enhanced social cohesion. It demonstrates that smart density is not about overcrowding but about creating well-designed environments where people thrive.
In summary, the principle of Density Done Right advocates for thoughtful urban growth that

balances density with livability—building cities that are efficient, inclusive, and resilient for future generations

51. Read the text and discuss vertical growth in city planning

Vertical Growth in City Planning

Vertical growth in city planning refers to the development of taller buildings and high-rise structures as a strategy to accommodate increasing urban populations and limited land availability. This approach allows cities to expand their capacity without sprawling outward, promoting more efficient land use and helping to create dense, vibrant urban environments.

The benefits of vertical growth include optimizing space in crowded city centers, reducing urban sprawl, and supporting sustainable development by concentrating infrastructure, transportation, and services within compact areas. High-rise buildings can also foster economic activity by providing diverse commercial, residential, and mixed-use spaces in close proximity.

However, implementing vertical growth requires careful planning to ensure it enhances livability. Key considerations include designing buildings that are energy-efficient and environmentally sustainable, creating accessible public spaces around tall structures, and maintaining human-scale environments through thoughtful urban design. Infrastructure such as transportation networks, utilities, and green spaces must be adapted to support increased density.

Vertical growth also presents challenges like potential congestion, strain on existing infrastructure, and the need for resilient construction standards to withstand environmental risks. Engaging communities and stakeholders is essential to balance development goals with residents' quality of life.

In summary, vertical growth is a vital component of modern city planning that enables urban areas to grow sustainably while maximizing land use efficiency. When thoughtfully executed, it can contribute to dynamic, resilient cities capable of meeting future demands.

52. Rean the text and answer the question : "Which works better – superblocks or flexible zoning?

When considering urban development strategies, the effectiveness of "Superblocks' bold redesigns" versus "Paris' flexible zoning" largely depends on the specific characteristics and needs of the city in question. Both approaches have proven successful in different contexts, and understanding their strengths can help determine which works better for a given urban environment.

«Superblocks' Bold Redesigns in Historic Cores»

Superblocks, or "superilles," are innovative urban planning concepts that focus on reclaiming streets from vehicular traffic to prioritize pedestrians, cyclists, and public spaces. This approach is particularly effective in historic city centers where dense, narrow streets often suffer from congestion, pollution, and a lack of public space. By redesigning these areas into superblocks, cities can significantly improve livability while preserving their cultural heritage.

In historic cores, superblocks enable the creation of vibrant public spaces that foster community interaction and cultural activities. They reduce traffic volume and pollution, making neighborhoods healthier and more inviting. Moreover, these redesigns often involve narrowing roads, introducing green spaces, and improving walkability—all without compromising the area's historic character. Cities like Barcelona have successfully implemented superblocks to transform congested neighborhoods into more sustainable and human-centered environments.

«Paris' Flexible Zoning in Sprawling Cities»

In sprawling cities where urban growth extends outward over large areas, flexible zoning policies are crucial for managing development sustainably. Paris's approach exemplifies this strategy by allowing adaptable land use regulations that can accommodate diverse needs—residential, commercial, industrial—while preventing uncontrolled sprawl.

Flexible zoning enables cities to rezone underutilized or industrial areas for higher-density residential or mixed-use developments. This promotes efficient land use, reduces the need for outward expansion into greenfield sites, and supports sustainable infrastructure planning. Paris's zoning policies also facilitate the integration of green spaces and public amenities within new developments, enhancing quality of life.

In sprawling cities with diverse neighborhoods and ongoing growth pressures, flexible zoning provides the necessary adaptability to respond to changing demands while maintaining urban

coherence. It encourages compact development patterns that conserve resources and reduce environmental impact.
«Which Works Better?»
Ultimately, both strategies are effective but serve different purposes:
- «Superblocks' bold redesigns» excel in historic cores where preserving heritage while improving livability is paramount. They transform congested streets into pedestrian-friendly zones without sacrificing cultural identity.
- «Paris's flexible zoning» is better suited for sprawling cities seeking sustainable growth management. It allows for adaptable land use that curbs sprawl and promotes dense, mixed-use neighborhoods.
In conclusion, neither approach is universally superior; instead, their success depends on context. Combining elements of both—such as implementing superblock principles within historic districts while employing flexible zoning in expanding suburbs—can create a balanced urban environment that respects history while fostering sustainable growth.

53. . Read the text and describe holistic policy. What does it mean?

Paris' Strategy: Holistic Policy

Paris has long been recognized for its innovative and comprehensive approach to urban planning, exemplified by its commitment to a holistic policy framework. This strategy integrates various aspects of city development—transportation, housing, green spaces, cultural preservation, and social inclusion—into a cohesive plan aimed at creating a sustainable, livable, and resilient city.
At the core of Paris' holistic policy is the recognition that urban challenges are interconnected. For example, improving mobility through expanded public transportation and cycling infrastructure reduces traffic congestion and pollution while enhancing accessibility. Simultaneously, efforts to promote affordable housing and mixed-use developments address social equity and prevent urban sprawl.
Green spaces are another vital component. Paris emphasizes the integration of parks, gardens, and green corridors within urban areas to improve air quality, support biodiversity, and provide residents with recreational opportunities. These natural elements are woven into the city's fabric through innovative projects like green roofs and urban forests.
Cultural preservation also plays a key role in Paris' strategy. The city balances modernization with safeguarding its historic architecture and neighborhoods, ensuring that development respects its rich heritage while embracing contemporary needs.
Furthermore, Paris' holistic policy prioritizes community engagement. By involving residents in planning processes and fostering inclusive decision-making, the city ensures that development benefits all citizens.
In essence, Paris' approach demonstrates that sustainable urban growth requires an integrated perspective—one that considers environmental health, social equity, economic vitality, and cultural identity as interconnected goals. This comprehensive strategy not only addresses current challenges but also sets a resilient foundation for the city's future.

54. . Read the text and describe Paris' Flexible Zoning

Paris' Flexible Zoning: A Strategy for Sustainable Urban Growth
Paris has adopted a flexible zoning approach as a key component of its urban development strategy, enabling the city to adapt to changing needs while promoting sustainable growth. Unlike rigid zoning regulations that strictly separate land uses, flexible zoning allows for a more adaptable and mixed-use approach, fostering vibrant neighborhoods and efficient land utilization.
This strategy is particularly important in a city with limited space and high development pressure. By allowing rezoning and mixed-use developments, Paris can transform underutilized or industrial areas into residential, commercial, or cultural spaces that meet current demands. This flexibility encourages higher-density development where appropriate, reducing urban sprawl and preserving green spaces outside the city core.
Flexible zoning also supports innovative urban projects, such as integrating green infrastructure, creating affordable housing, and promoting walkable neighborhoods. It enables policymakers to respond swiftly to emerging trends and community needs without lengthy regulatory processes.

Moreover, it fosters economic vitality by attracting diverse businesses and residents, enriching the city's social fabric.
Importantly, Paris' approach balances flexibility with careful planning to ensure that new developments respect the city's historic character and environmental sustainability. By combining adaptable zoning policies with strategic oversight, Paris creates a resilient urban environment capable of evolving sustainably over time.
In summary, Paris' flexible zoning is a forward-thinking strategy that promotes efficient land use, supports diverse community needs, and helps manage growth sustainably—making it a model for modern urban planning in dense historic cities.

55. Read the text and describe Melbourne's experiment

Hybrid Potential: Melbourne Blends Pedestrian Zones and 20-Minute Neighborhoods

Melbourne exemplifies a forward-thinking approach to urban planning by blending the strengths of pedestrian zones, inspired by cities like Barcelona, with the concept of 20-minute neighborhoods. This hybrid strategy aims to create more livable, accessible, and sustainable urban environments that cater to diverse community needs.
Pedestrian zones in Melbourne focus on reducing vehicle traffic in key areas, transforming streets into vibrant public spaces that prioritize walking, cycling, and social interaction. Inspired by Barcelona's superblocks, these zones help decrease congestion and pollution while enhancing the quality of urban life. They foster local commerce, encourage community engagement, and make city centers more inviting for residents and visitors alike.
Complementing this is the idea of 20-minute neighborhoods—urban areas where residents can access most daily necessities within a 20-minute walk or bike ride. Melbourne's implementation of this concept involves creating mixed-use developments with local shops, schools, parks, healthcare facilities, and public transport options all within easy reach. This approach reduces dependence on cars, promotes active lifestyles, and strengthens community bonds.
By integrating pedestrian-friendly zones with the 20-minute neighborhood model, Melbourne aims to balance accessibility with sustainability. This hybrid strategy ensures that neighborhoods are not only walkable but also self-sufficient, fostering resilient communities that can adapt to future challenges such as climate change and population growth.
In essence, Melbourne's innovative blend of these concepts demonstrates how cities can leverage multiple planning strategies to build more inclusive, healthy, and sustainable urban environments—serving as a model for other cities seeking holistic urban transformation.

56. Read the text and describe the superblock model

The Superblock Model: How It Works

The superblock model is an innovative urban planning approach designed to transform city neighborhoods into more livable, sustainable, and human-centered spaces. Originating in Barcelona, this model reorganizes street networks to prioritize pedestrians, cyclists, and public spaces over vehicular traffic.
At its core, the superblock involves grouping several city blocks into a larger unit, or "superblock," where through-traffic is restricted or significantly limited. The main streets surrounding these superblocks remain accessible for vehicles, but internal streets are transformed into pedestrian-friendly zones. This reduces traffic congestion and pollution within the superblock, creating safer and more inviting environments for residents.

Inside the superblock, streets are redesigned to include wider sidewalks, green spaces, playgrounds, and seating areas. Parking is often relocated to the periphery or underground to free up space for community use. The result is a neighborhood where walking and cycling become the primary modes of transportation, encouraging active lifestyles and reducing reliance on cars.
The superblock model also promotes local commerce by making streets more attractive for shops and cafes, fostering vibrant community interactions. Additionally, it enhances environmental sustainability by decreasing emissions and increasing urban greenery.
Overall, the superblock works by reconfiguring urban space to prioritize people over vehicles. It

creates healthier, more connected neighborhoods that support social interaction, environmental health, and improved quality of life—making cities more sustainable and enjoyable places to live.

57. Read the text and describe the holistic approach in urban planning

Portland's "Complete Communities": A Holistic Approach to Urban Development

Portland's "Complete Communities" initiative exemplifies a comprehensive and inclusive approach to urban planning aimed at creating equitable, vibrant, and sustainable neighborhoods. This strategy focuses on integrating housing, transportation, economic development, and social services to ensure that all residents have access to the resources and opportunities they need for a high quality of life.

At the heart of Portland's "Complete Communities" is the recognition that neighborhoods should be designed to serve diverse populations with varying needs. The program emphasizes equitable development by promoting affordable housing options, supporting small businesses, and improving access to public transit, parks, schools, and healthcare facilities. This ensures that residents can easily reach essential services without excessive reliance on cars.

The initiative also prioritizes community engagement, encouraging residents to participate in planning processes and decision-making. This participatory approach helps tailor development projects to local needs and fosters a sense of ownership and belonging among community members.

Sustainability is another key component. Portland's strategy promotes walkable neighborhoods with mixed-use developments that reduce urban sprawl and lower environmental impact. Investments in green infrastructure, such as parks and stormwater management systems, further enhance resilience against climate change.

Overall, Portland's "Complete Communities" demonstrates how a holistic, equity-focused approach can transform urban areas into inclusive spaces where people of all backgrounds can thrive. By integrating housing, transportation, economic vitality, and community participation, the city aims to build resilient neighborhoods that support sustainable growth for generations to come.

58. Read the text and describe how Tokyo solves the problem of housing

Tokyo's Adaptive Reuse: Transforming Parking Lots into Housing

Tokyo exemplifies innovative urban renewal through its adaptive reuse strategies, notably transforming underutilized parking lots into vibrant residential spaces. As the city faces limited land availability and a growing population, repurposing existing sites offers a sustainable solution to address housing shortages while optimizing land use.

This approach involves converting surface parking lots—often seen as vacant or underused—into high-density housing developments that blend seamlessly into the urban fabric. By repurposing these spaces, Tokyo reduces urban sprawl, preserves green areas, and creates new communities within existing neighborhoods.

The process typically includes retrofitting or rebuilding structures to meet modern residential standards, incorporating amenities such as green spaces, commercial outlets, and public transportation access. This not only increases housing supply but also revitalizes neighborhoods by attracting residents and supporting local economies.

Tokyo's adaptive reuse of parking lots demonstrates how cities can creatively address land scarcity challenges. It promotes sustainable urban growth by maximizing existing infrastructure, reducing environmental impact, and fostering more walkable, livable communities—all while maintaining the city's dynamic character.

59. Read the text and describe one of the methods for urban mobility

Redesigning Streets: Innovative Strategies for Urban Mobility

Cities around the world are reimagining their street layouts to promote safer, more sustainable, and more accessible urban environments. Two prominent approaches include street redesigns and congestion pricing.

«Removing Lanes and Adding Bike Paths:»

Seattle's 4th Avenue exemplifies this strategy by removing car lanes to create dedicated bike lanes and wider sidewalks. This redesign prioritizes pedestrians and cyclists, reduces vehicle speeds, and

encourages active transportation. Such modifications help decrease traffic congestion, improve air quality, and foster healthier communities by making streets more welcoming for non-motorized users.
«Congestion Pricing:»
London has implemented a congestion charge of £15 per day for vehicles entering the city center during peak hours. This financial disincentive aims to reduce the number of cars in congested areas, encouraging residents and visitors to opt for public transit, cycling, or walking. The revenue generated is often reinvested into transportation infrastructure, further enhancing sustainable mobility options.
Together, these strategies demonstrate how urban areas can effectively redesign streets to balance mobility needs, reduce environmental impact, and create more livable city spaces. By removing unnecessary lanes in favor of active transportation infrastructure and implementing congestion pricing, cities are taking significant steps toward smarter, healthier urban environments.

60. Read the text and describe the advantages of “people-first city” model

Why People-First Cities Thrive
People-first cities prioritize the well-being, safety, and quality of life of their residents in every aspect of urban planning and development. By focusing on human needs rather than solely on cars, infrastructure, or economic growth, these cities create environments that are more livable, inclusive, and resilient.
In such cities, public spaces are designed to encourage social interaction, community engagement, and outdoor activities. Streets are reimagined as vibrant places for pedestrians and cyclists, reducing reliance on private vehicles and promoting healthier lifestyles. Access to parks, green spaces, affordable housing, quality education, healthcare, and public transportation ensures that all residents can thrive regardless of their background or income.
People-first cities also foster social equity by addressing disparities and ensuring that underserved communities have equal access to opportunities and resources. This approach builds stronger social cohesion and a sense of belonging among residents.
Furthermore, by emphasizing sustainability and resilience—such as reducing pollution and preparing for climate change—these cities create environments that support long-term health and prosperity. They adapt to changing needs through flexible policies and innovative solutions.
Ultimately, cities that put people at the center of their design cultivate happier, healthier communities where individuals can live comfortably, work productively, and participate actively in civic life. Such an approach not only enhances quality of life but also drives sustainable urban success.

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

2. Сосунова Г. А. Французский язык для подготовки специалистов таможенной службы. В 2 частях. Ч.1: учебник / Г. А. Сосунова. - Французский язык для подготовки специалистов таможенной службы. В 2 частях. Ч.1 - Москва: Российская таможенная академия, 2017. - 232 c. - 978-5-9590-0940-3. - Текст: электронный // IPR SMART: [сайт]. - URL: https://www.iprbookshop.ru/93228.html - Режим доступа: по подписке

3. Сосунова Г. А. Французский язык для подготовки специалистов таможенной службы. В 2 частях. Ч.2: 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 - Режим доступа: по подписке

4. Овсиенко Т. В. Grundstufe Deutsch: 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 - 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.

2. Горкун М.Г. Учебник английского языка: Учебник. / М.Г. Горкун. - 2-е изд., перераб. и доп. - Выща шк., 1991. - 359 - 5-11-002056-6. - 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

Смешанный тип
Меловая доска - 1 шт.

Учебная аудитория
Интерактивная панель - 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.
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.
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.