



NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE, PLANNING AND CONSTRUCTION

QUALIFICATION: BACHELOR OF TOWN AND REGIONAL PLANNING	
QUALIFICATION CODE: 07BTAR	NQF LEVEL: 7
COURSE CODE: SSP720S	COURSE NAME: SUSTAINABLE SETTLEMENT PLANNING
SESSION: OCTOBER / NOVEMBER 2025	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
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NOTES:
<ol style="list-style-type: none">1. Read the entire question paper before answering the questions2. Ensure your number your answers correctly3. Please write clearly and legibly4. You must answer all questions5. Make sure your Student Number is on the Examination Book(s)

THIS QUESTION PAPER CONSISTS OF 5 PAGES (including this front page).

Question 1

New Urbanists proclaims that Urban Sprawl, mono functional and inefficient urban systems pose the greatest threats to sustainability in urban centres. These professionals are firmly of the opinion that the adoption of New Urbanists principles would effectively combat these ills.

- (a) Should the City of Windhoek adopt New Urbanism as its urban planning dogma, indicate how that would ensure a more sustainable Windhoek. (5)

Despite the well-researched positive impacts, the application of New Urbanist principles could have on an urban system; there are numerous criticisms levelled against the movement.

- (b) Evaluate the critique of New Urbanism. (Highlight the criticism and indicate if it is valid) (5)

[10]

Question 2

Climate change is one of the most pressing issues of our time, threatening ecosystems, economies, and communities worldwide. At the same time, humankind is on the precipice of a big data revolution, ushered in by AI technology. Big data refers to the vast volumes of data generated from various sources at high velocity and with great variety. It encompasses everything from satellite imagery and sensor data to social media activity and weather forecasts. Analyzing and interpreting this data is crucial for understanding and addressing climate change.

- (a) How should Environmentalists apply Big Data to inform climate change initiatives? (5)

A Smart City is a municipality that uses information and communication technologies (ICT) to increase operational efficiency, share information with the public and improve both the quality of government services and citizen welfare. This Big Data revolution and complimentary AI technology could also make the Smart City concept come to life.

Implementing Smart City Initiative, however, can be challenging.

- (b) Point out some Smart City Challenges and Concerns; however, abstain from referring to the digital divide, digital literacy as well as digital exclusion. (5)

[10]

Question 3

Environmental Scientists have deduced that deforestation, or the clearing of forests, significantly contributes to climate change.

- (a) Provide a justification for the statement. (6)

- (b) What do you think about the notion that Social Sustainability cannot be achieved without due consideration of inter- and intra-generational equity? (4)

[10]

Question 4

The area depicted by the satellite image, attached as depicted in Figure 1 below represents a central node on the edge of the Windhoek Central Business District. This node, due to its location, surrounding land uses and transportation links, are one of the most suitable sites for the development of a Transit Oriented Development (TOD) node/ neighbourhood. The City of Windhoek has recognized such and resolved to undertake an infill and regeneration project to create the city's highest order TOD node.

Figure 1: Central Windhoek



Write an advisory note to the Local Authority that detail the aspects that ought to be considered in the design and development of a TOD node /neighbourhood in the area depicted in Figure 1.

[10]

Question 5

- (a) What ideas can you add to the broaden the definition of 'Sustainable Development' as coined by the Brundtland Commission? Please refer to the Namibian Legislation that provided a context specific definition of 'Sustainable Development'. (5)

Several of the principles of Spatial Planning as contained within the Urban & Regional Planning Act: Act No. 5 of 2018) directly relates to Sustainable Development.

- (b) Select and unpack the most important principles of Spatial Planning that directly relates to Sustainable Development. (5)

[10]

Question 6

- (a) Provide an overview of the intersection between Sustainable Development Goal no. 12 and the United Nations' definition of the 'Green Economy'. (5)

The circular economy could be regarded as a component of the Green Economy and is indeed a sustainable economic model that could be pursued to minimize the impact of the economy on the environment.

- (b) Defend this statement. (5)

[10]

Question 7

A township development's environmental impact can be likened to an environmental footprint.

Discuss the "Ecological Footprint" concept as likened to a township development.

[10]

Question 8

Urban Planners invariably are complicit in causing the destruction of the natural environment with the continual development of sprawling townships, which in turn amongst other problems, increases the amount of Greenhouse Gasses in the atmosphere which in the long run contribute to climate change. The adoption of a Green Infrastructure Planning Approach could however significantly aide combating climate change.

- (a) The adoption of a Green Infrastructure Planning Approach could significantly aide in combating climate change. (5)
- (b) Recommend the ideal green infrastructure improvements for any are in proximity to a sensitive or high ground water table. **DO NOT MAKE REFERENCE TO URBAN FORESTS, GREEN WALLS, GREEN ROOFS NOR MAKE REFERENCE TO GREEN STREETS.** (5)

[10]

Question 9

The Sustainable Development Goal No. 11 calls on nation states to "Make cities and human settlements inclusive, safe, resilient and sustainable".

- (a) Prioritise five critical tenets of SDG 11 that is most important to ensure sustainability in Namibia's urban centres. (5)

Sustainable Development Goal No. 11 should be entrenched in any Urban and Regional Planner's daily work; however, as an urban planner you need to know of, and understand the other Sustainable Development Goals (SDG's) too.

- (b) Please thus provide your understanding of any other SDG that does not pertain to terrestrial activities. (5)
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Question 10

Densification is a term used by planners, urban designers, developers and theorists to describe the increasing density of people living in urban areas.

- (a) Deliver a memorandum explaining to councillors that densification do not automatically results in high rise developments, similar to what is the norm in Asia, but that there are multiple ways to attain densification. Refer specifically to 'hard densification' and 'soft densification'. (5)

Urban Densification is well complimented by the adoption of a Zoning Scheme that accommodates Mixed Land Use as a zoning.

- (b) Draw on the concept of Mixed Land Use as contained within the draft Windhoek Zoning Scheme of 2024 to elevate the positive connotation with densification. (5)

[10]

TOTAL = 100