



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT**

**DEPARTMENT OF ARCHITECTURE, PLANNING AND CONSTRUCTION**

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

<b>SECOND OPPORTUNITY/ SUPPLEMENTARY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	Ms. GB van Rooi
<b>MODERATOR</b>	Ms. H.T.S Kevanhu

<b>NOTES:</b>
<ol style="list-style-type: none"><li>1. Read the entire question paper before answering the questions</li><li>2. Ensure that you number your answers correctly</li><li>3. Please write clearly and legibly</li><li>4. You must answer all questions</li><li>5. Make sure your Student Number is on the Examination Book(s)</li></ol>

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

**Question 1**

Urban Ecology is essential for human wellbeing and prosperity.

- (a) Justify the statement. (5)

Resilience to climate change for cities is ensure by the adoption of mitigation measures that anticipates the hazards that such change is bringing or will bring.

- (b) What changes would you bring about in the practise of Urban Development and Design to mitigate climate change impacts? (5)

[10]

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**Question 2**

The SandSpit that protects Walvis Bay is in danger of being eroded due to the impacts of sea level rise. Urban planning in this industrial town should endeavour to achieve a more integrated approach to fully adapt to the implications of sea level rise.

- (a) What advice would you give to the Walvis Bay urban planners that could guide their efforts in addressing this challenge? (5)

Walvis Bay's economy is strongly linked to Ocean Based activities. Such could only benefit from Marine Spatial Planning.

- (b) What information would you use to support this view? (5)

[10]

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**Question 3**

Nations with a decidedly large environmental footprint, like the UK for example is regarded as an ecological debtor, whereas Namibia is an ecological creditor as it has a small environmental footprint.

- (a) What are the features of ecological creditors and ecological debtors? (6)

The precautionary principle is widely accepted as a guideline in environmental decision making.

- (b) What is the function of the precautionary principle? (4)

[10]

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**Question 4**

The overarching mission of a smart city is to optimize city functions and drive economic growth while improving quality of life for its citizens using smart technology and data analysis. Windhoek is aspiring to become a Smart City within the next decade.

- (a) Explain how the 'Digital Divide' concept may hamper the City of Windhoek's quest to become a Smart City. (5)
- (b) Can you propose which Smart City initiatives must be prioritised in Windhoek to improve the efficiency of service delivery in the city? (5)

[10]

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**Question 5**

The Old Power Station redevelopment in the Southern Industrial area of Windhoek is an exemplary example of a 'brownfield' development'. Prior to this redevelopment the area was subject to severe urban decay.

- (a) Provide a brief elaboration on the term urban decay. (5)

Urban Regeneration projects generally display characteristics of a Mixed Land Use development.

- (b) How would the adoption of the proposed Mixed Land Use zone within the draft Windhoek Zoning Scheme of 2024 aid in continued success of the redevelopment of the Old Power Station. (5)

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**Question 6**

Compact cities are characterised by dense and proximate development patterns linked by public transport systems and with accessibility to local services and jobs, which can counteract negative impact of sprawl and maximise the economic, social and environmental potential of cities.

- (a) What urban planning interventions would aid in bringing about a Compact City? (5)

Despite its proven benefits the Compact City have been criticised heavily.

- (b) Discuss why the Compact City may not be as ideal as academics make it out to be. (5)

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Question 7

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

- (a) Prioritise at least one principle of SDG No. 11 and indicate how you would ensure it is integrated within urban planning practice in any town within Namibia. (5)
- (b) Provide evidence that integrating New Urbanism principles into urban planning and design would ensure more sustainable urban areas. (5)

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Question 8

The circular economy is a sustainable economic model that could be pursued to minimize the impact of the economy on the environment

- (a) Justify the statement. (5)

Namibia is highly dependent on its Marine Economy, which in broad could also be referred to as the Blue Economy.

- (b) Explain to a potential Blue Economy entrepreneur what the scope of the blue economy in Namibia is. (5)

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Question 9

Windhoek is faced by the risk of extreme heat, water shortages and flash floods because of climate change. The city thus could adopt the Green Infrastructure planning approach to guide mitigation and adaptation measures.

- (a) What do you as an urban planner have to do to bring about an urban forest in Windhoek? (3)

A green street minimizes or reduces energy costs for the community.

- (b) What facts justify this statement? (5)
- (c) Why is a Green Street considered as an integral part of a sustainable stormwater system? (2)

[10]

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Question 10

The Urban and Regional Planning Board (URPB) must assess the sustainability of new townships.

- (a) Explain to the URPB what the interaction between land use patterns, transport and the environment are. (5)

Urban density affects travel activity.

- (b) Indicate how this statement is applicable to the high-density Grove Precinct in Kleine Kuppe as well as the low-density Pionierspark Township in Windhoek. (5)

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**TOTAL = 100**