



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES**

**DEPARTMENT OF ARCHITECTURE AND SPATIAL PLANNING**

<b>QUALIFICATION:</b> Bachelor of Town and Regional Planning Bachelor of Regional and Rural Development	
<b>QUALIFICATION CODE:</b> 07BTAR 07BRAR	<b>LEVEL:</b> 6 <b>CREDITS:</b> 10
<b>COURSE CODE:</b> CEP610S	<b>COURSE NAME:</b> Civil Engineering for Planners
<b>SESSION:</b> June 2019	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	Jacques Korrubel
<b>MODERATOR:</b>	Marina Coetzee

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Answer ALL the questions.</li><li>2. Write clearly and neatly.</li><li>3. Number the answers clearly.</li><li>4. Use sketches to improve your answers.</li></ol>

***PERMISSIBLE MATERIALS***

1. Calculator, ruler, pencil and eraser

**THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)**

**Question 1**

Provide explanations for the following:

- (a) the goals that should be strived for when designing public buildings and open spaces (8)
- (b) the objectives a Local Authority must strive for in the provision of recreational facilities in their jurisdiction areas. (4)
- (c) the spatial factors a planner must take into consideration when allocating land for nurseries and primary schools (3)

[15]

---

**Question 2**

How would you determine the most suitable locality for a solid waste disposal site?

[6]

---

**Question 3**

Explain the following practices used by a Local Authority to make water provision to the low-income communities more affordable:

- (a) Cross subsidisation of the water service charges (3)
- (b) A sliding scale fee structure for water service charges. (3)

[6]

---

**Question 4**

List the functions a road network renders within a local authority area.

[6]

---

**Question 5**

List the critical components of the Namibian electricity supply network as well as the institutions or organisation responsible for these components.

[6]

---

**Question 6**

Identify the critical components of a “French Drain” sanitation system that ensure the proper functioning of such a sanitation system. Please provide your answer in a sketch and legend format.

[6]

---

**Question 7**

Provide detailed definitions for the following:

- (a) Privatisation of a service network (2)
- (b) Inter-Sectoral linkages (2)
- (c) Regional Electricity Distributor (2)
- (d) French Drain sewer system (2)
- (e) Compatibility of public facilities (2)

[10]

---

**Question 8**

List the principles of Integrated Environmental Management which applies to the process of managing an infrastructure development project.

[9]

---

**Question 9:**

What are the benefits of the installation of municipal services in a settlement?

[7]

---

**Question 10**

Elaborate on the listed activities for water resource developments that require environmental clearance in terms of the Environmental Management Act, 2007.

[5]

---

**Question 11**

What are the functions of the Communications Regulatory Authority of Namibia to achieve its mandate of managing the telecommunications networks in Namibia?

[6]

---

**Question 12**

Water scarcity continues to be a serious constraint in achieving the economic, social and environmental development objectives for Namibia. Explain the water strategies proposed in Namibia's NDP5 and support with appropriate examples.

[8]

---

**Question 13**

- (a) Define the concept of *Development (Capital) Projects*? (2)
- (b) The construction of capital projects is implemented through the Project Cycle. Name any three stages of the project cycle. (3)
- (c) Explain the procedures for the implementation of development projects for sub-national authorities. (5)

[10]

---

**TOTAL: 100 marks**

**END**