



**NAMIIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES

DEPARTMENT OF ARCHITECTURE AND SPATIAL PLANNING

QUALIFICATION: Bachelor of Town and Regional Planning	
QUALIFICATION CODE: 07BTAR	LEVEL: 6
COURSE CODE: PLP621S	COURSE NAME: Principles and Guidelines for Layout Planning
SESSION: January 2020	PAPER: THEORY
DURATION: 3 Hours	MARKS: Total 100

SECOND OPPORTUNITY / SUPPLEMENTARY EXAMINATION QUESTION PAPER	
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INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly.4. The provision of sketches with answers is recommended

PERMISSIBLE MATERIALS

1. Calculator, ruler, pencil and eraser

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

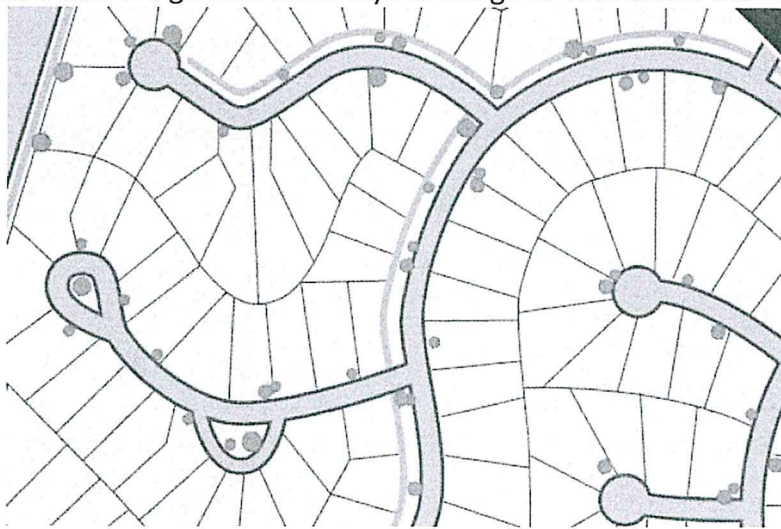
Question 1

Distinguish between the various elements which form the movement networks in Namibia urban settlements?

[11]

Question 2

The figure below illustrates the generic block layout design format called the “Cul-de-sac” design.



- (a) Describe the positive aspects of the “Cul-de-sac” design format. (4)
- (b) Describe the negative aspects of the “Cul-de-sac” design format. (4)
- [8]

Question 3

Human society functions in a landscape that consists of the original natural landscape, as well as rural and urban landscapes. In order to achieve an orderly structure and framework in human settlement the structural principle of continuity is vital in the design of settlement. In your own words:

- (a) Motivate the necessity for the continuity of green spaces in a human settlement. (6)
- (b) Motivate the necessity for the continuity of movement with a human settlement. (6)
- (c) Explain in which circumstances the structural principle of “Discontinuity of Movement” would be desirable in the design of settlements. (4)

[16]

Question 4

A topographical analysis assists planners to determine the slope (gradient) of a terrain.

- (a) Reproduce the table below in your answer book and indicate the optimum gradients in respect of the activity types indicated: (5)

Activity type	Gradient (%)
<i>General purpose</i>	
<i>Informal</i>	
<i>Planted area</i>	
<i>Paved area</i>	
<i>Roads</i>	

- (b) How would you conduct a slope analysis? (8)
[13]
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Question 5

The integrated approach, on which the framework for settlement-making is based, makes it possible to identify certain performance qualities our urban settlements must strive for.

- (a) Based on your studies, please explain how “Sustainability” can be classified as being one of the performance qualities. (4)
- (b) In what way would you design a settlement to improve the “Quality of Place”, as being another performance quality? (6)
- (c) Provide a checklist of the physical characteristics a human settlement will display if its designer incorporated all of the performance qualities in their design. (5)
[15]
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Question 6

Make a distinction between all the spatial design principles that are essential for proper settlement making.

[14]

Question 7

The three main soil types (clay, sand and silt) have characteristics that may have important implications for urban development.

- (a) Describe these soil types with reference to their characteristics. (9)
- (b) What would you recommend as possible on site tests to determine the specific soil type when analysing a site for potential development? (6)
- [15]**
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Question 8

Effective and efficient land utilisation is one of the quantitative guidelines for land subdivisions. Describe the following guidelines of effective land utilisation in detail:

- (a) Erf dimensions (2)
- (b) The 2 types of residential densities (4)
- (c) The tool called Land utilisation Index (2)
- [8]**
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Question 9

The installation of a storm water drainage network in a settlement will have layout implications on the planning and design of a settlement. Describe any 7 of these layout implications in detail.

[7]

END

[100]