



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF NATURAL RESOURCES AND SPATIAL SCIENCES

DEPARTMENT OF GEO-SPATIAL SCIENCES AND TECHNOLOGY

QUALIFICATIONS: BACHELOR OF GEOMATICS, DIPLOMA IN GEOMATICS	
QUALIFICATION CODE: 07BGEM ,06DGEM	LEVEL: 5
COURSE CODE: CAS520S	COURSE NAME: CADASTRAL SURVEYING 1
SESSION: NOVEMBER 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY 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.

PERMISSIBLE MATERIALS

Calculator, ruler, pencil and eraser

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

QUESTION 1

- 1.1 Define cadastral surveying. (4)
- 1.2 Describe the purpose of the Land Survey Act 33 of 1993. (1)
- 1.3 Explain how current cadastral systems around the world tend to resemble the Ancient Egyptian Cadastral system. (2)
- 1.4 Name and explain the **two (2)** types of cadastral boundaries used by countries around the world. Which type is used in Namibia? (5)
- 1.5 Outline the **four (4)** duties of a Land Surveyor as per the Land Survey Act 33 of 1993. (8)

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QUESTION 2

- 2.1 Describe the following **four (4)** types of demarcation:
- (a) Beacon relocation (2)
- (b) Subdivision (2)
- (c) Consolidation (2)
- (d) 'Servitude'. Indicate the terms given to the two properties that are the subjects of a servitude. (4)
- (e) In what way does *a* personal servitude differ from a praedial servitude? (2)
- 2.2 Describe the following procedures that a land surveyor follows when preparing to go and perform a cadastral survey.

- (a) Liaising with property owners (2)
- (b) Searching for survey information in the Surveyor General's Office (2)
- 2.3 Mention the **six (6)** members of the Namibia Council of Professional, Technical Surveyors and Survey Technicians. (6)

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QUESTION 3

- 3.1 Define parent diagram. (2)
- 3.2 State **two (2)** typical scenarios that can assist a land surveyor in identifying the correct noting plan when searching for information in the Surveyor General's office prior to commencing field work. (2)
- 3.3 For the purpose of Deeds registration Namibia is divided into partitions. What name is given to these partitions? (1)
- 3.4 Give a brief description of each of the following **four (4)** sections that comprise the Division of Survey and Land Information;
- (a) Section of Cadastral Surveys (2)
- (b) Section of Geodetic Surveys (2)
- (c) Section of Survey Examinations. (2)
- 3.5 Mention any **five (5)** kinds of information that you find on a farm index card. (5)
- 3.6 Describe any **two (2)** characteristics of Noting Plans. (4)

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QUESTION 4

- 4.1 What is the importance of the subdivision sketch during examination at the Surveyor General's Office? (2)
- 4.2 Mention **two (2)** possible ways by which you can obtain the coordinates of new subdivision points. (2)
- 4.3 If you are demarcating a property using a Total Station, explain how you would place subdivision beacons if control points are far from the site of the survey. (2)
- 4.4 Describe the following records that must be included in the survey records:
- (a) Survey report. (2)
 - (b) Regulation 57(1)k certificate. (2)
 - (c) Working plan. (2)
- 4.5 In the case of a servitude diagram explain why it is ideal to have a minimum number of four copies of the same diagram approved by the Surveyor General . (4)

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QUESTION 5

- 5.1 Define the following:
- (a) Accurately determined. (1)
 - (b) An arc of observations. (1)
- 5.2 Name the different classes of accuracy of survey and give **one (1)** example of each class. (6)
- 5.3 Mention the prescribed minimum size and erection manner for:
- (a) A beacon for land situate in a township. (2)

- (b) A beacon for rural land. (2)
- 5.4 Mention any **three (3)** circumstances when it shall not be necessary to define a corner point by a beacon. (6)
- 5.5 Mention the symbols (you may use sketches) used for the following:
- (a) Beacon placed (1)
- (b) Beacon found (1)
- (c) Trigonometrical beacon (1)
- (d) Line indicating adjacent properties. (1)

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