

FACULTY	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
DEPARTMENT	ENVIRONMENTAL SCIENCE		
SUBJECT	LAND ADMINISTRATION AND GIS		
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Regular Examination

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This question paper consists of two (2) pages excluding this front page.

Instructions

1. Work in an orderly way and present your work as neatly as possible.
2. Mark your questions correctly and clearly.
3. Answer all questions.

QUESTION 1

[15]

1.1 State whether each of the following statement is true or false:

- a) Land registration and cadastre usually contradict one another. (1)
- b) Land tenure is linked to social, economic and political structures. (1)
- c) Spatial Data Infrastructure (SDI) allows the aggregation of land information from local to national level. (1)
- d) Relying on a single-toll solutions to remedy complex situations is one of the benefits of land administration system design. (1)
- e) The design of land administration systems in some countries is affected by different legal traditions as well as colonial experiences. (1)

1.2 Define the following terms:

- a) Transfer rights (2)
- b) A Deed (2)
- c) Land registration (2)
- d) Formal property rights (2)
- e) Unique Parcel Identifier (2)

QUESTION 2

[34]

2.1 The open geospatial consortium (OGC) standards are classified into four classes that is, for accessing geospatial data, processing, discovering as well as for encodings.

- a) List the three web services that are used for accessing geospatial data. (3)
- b) Mention one web service each for processing data and discovering geo-resources respectively. (2)

2.2 Highlight any three principles of land administration which set boundaries to make local decisions for land managers and Land Administration System (LAS) designers. (3)

2.3 Security of tenure and management of land disputes are two of the traditional benefits of LAS, what is your understanding of these benefits? (4)

2.4 Highlight the five components of a Spatial Data Infrastructure (SDI). (5)

2.5 Distinguish between the following three terms: Rights, Restrictions and Responsibilities. (6)

2.6 Briefly discuss the land management paradigm as one of the ingredients in LAS development. (6)

- 2.7 Assume you are a Land Information expert who is addressing a group of students that came for study tour at your work place. Use figure 1 below, which is showing an extract of erven/parcels from a Cadastral Land Information System (CLIS), and explain the process of subdivision of parcels can be done in the digital LIS using a GIS software. Give an example of subdividing Erf No. 627 shown in figure 1 below into three smaller erven. (5)

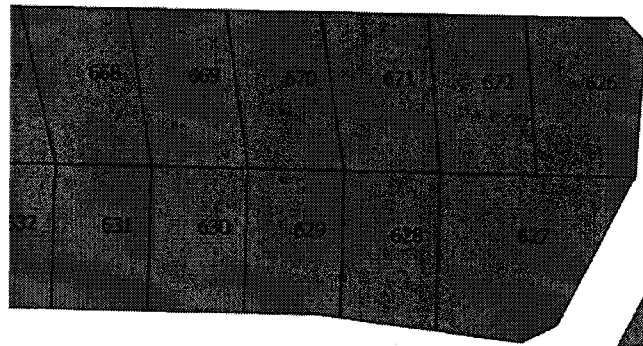


Figure 1. Cadastral parcels

QUESTION 3

[51]

- 3.1 Explain how the two types of registration systems, deeds registration and a title registration systems, are different from one another. (6)
- 3.2 Briefly discuss any three land tenure interests as set out by the Food and Agriculture Organisation of the United Nations. (9)
- 3.3 The core tenure processes varies from one country to another but there are some processes that are common to most countries. Discuss any four of the core tenure processes that are common to most countries. (12)
- 3.4 Outline the three categories of tools in the land administration toolbox and provide three example of such tools from each category. (12)
- 3.5 From the experience and knowledge you gained when researching about the Directorate of Survey and Mapping, you indicated that examination of a survey diagram (cadastre) takes about seven days to complete. Briefly describe what happens at each of the six steps involved in the said examination. (12)