

UNIVERSITY OF FORT HARE

**GEOGRAPHIC
INFORMATION SYSTEMS
FOR HUMAN SETTLEMENT
HGS 311**

DEGREE EXAMINATIONS

NOVEMBER

2018

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Time: 1 Hour 30 Minutes

Subject: Geographic Information Systems

Marks: 50

**This paper consists of 3 pages including the
cover page**

Internal Examiners

Mr O Manyanye

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INSTRUCTIONS

Read all questions carefully

Answer ALL questions.

QUESTION 1

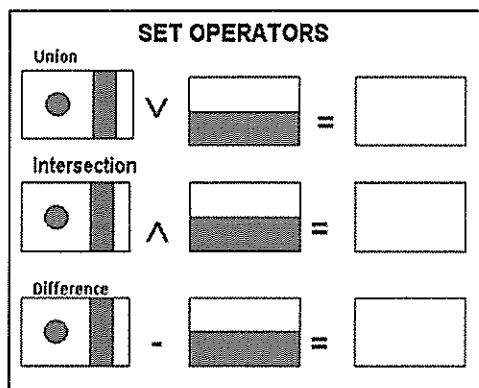
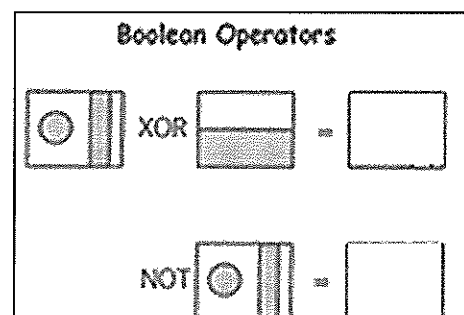
3

Explain what you understand GIS to be.

QUESTION 2

5

Complete the following diagrams and write the answer on your answer booklets.

**(3)****(2)**

QUESTION 3

4

Briefly explain, giving examples, the vector analysis operation “Containment search”.

QUESTION 4

5

(a) **Briefly explain** where buffering can be used. **(2)**

(b) What are the basic criteria that raster layers must meet in order to carry out a raster overlay operation? **(3)**

QUESTION 5

5

(a) List **three** criteria usually used for classifying maps. **(3)**

(b) List **two** types of maps of your choice. **(2)**

QUESTION 6

5

Are the following discrete or continuous datasets?

- (a) The volume of water stored in a tank. **(1)**
- (b) A temperature map of the Eastern Cape. **(1)**
- (c) The number of reports on the production of tomatoes. **(1)**
- (d) The average age of the HGS 311 students. **(1)**
- (e) The number of questions in this exam. **(1)**

QUESTION 7

6

Giving an example for each, how is a GIS used to answer the question of "What is, Where, and Why"?

QUESTION 8

7

List **seven** elements that can assist one in visual interpretation of images such as aerial photographs and satellite images.

**QUESTION
10**

9

For a GIS to be effective there are five components that work together to achieve the desired results. Identify **five** components and **explain** how they contribute to the effectiveness of a GIS.

End of Paper

