



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2016/2017**

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR DEGREE OF  
BACHELOR OF SCIENCE IN GEOSPATIAL INFORMATION SCIENCE  
WITH INFORMATION TECHNOLOGY**

**CITY CAMPUS**

**PGS 113: SPATIAL DATA SOURCES AND SPATIAL DATA TYPES**

Date: 30<sup>th</sup> November, 2016

Time: 3.00 - 12.00pm

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**INSTRUCTIONS:**

- Answer Questions ONE (Compulsory) and any other TWO.
- Sketch maps and diagrams should be used whenever necessary.



1.
  - a. In GIS analysis, we are concerned with data and information, how are these terms different? (5marks)
  - b. With the aid of diagrams differentiate between attribute data and spatial data (10 marks)
  - c. Describe the main categories of GIS data (15 marks)
2. State the advantages and disadvantages of storing GIS data in either raster or vector format and state which is the better option. [20 Marks]
3.
  - a. "Every geographical phenomenon has a boundary". Explain (10 marks)
  - b. Describe 4 data values that can be assigned to GIS data (10 marks)
4.
  - a. Define the term topology (2 marks)
  - b. Describe 4 topological rules of consistency (8 marks)
  - c. With aid of diagram, explain five spatial relationship (10 marks)
5. Describe various ways computer represent and store geographic information (20 marks)
6.
  - a. Describe how time can be mapped and visualized in GIS (8 marks)
  - b. Briefly explain 3 temporal dimension of time (6 marks)
  - c. State 3 orders of time as categorized in GIS software (6 marks)