



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FOURTH YEAR SECOND SEMESTER EXAMINATION FOR THE
DEGREE OF BACHELOR OF ARTS WITH INFORMATION
TECHNOLOGY**

CITY CAMPUS

PGS 413:GIS IN TRANSPORT PLANNING

Date: 20th April, 2016

Time: 2.00 - 4.00pm

INSTRUCTIONS:

- **Answer Question ONE and any other TWO Questions.**

Question 1

- a) Demand for transportation is a derived demand. Briefly comment on this statement with respect to transport in Kisumu city. [6 marks]
- b) Discuss the main components of a transportation system. [12 marks]
- c) Outline the main stages of the four-step travel demand modelling process and discuss the data requirements in each stage. [12 marks]

Question 2

You have been hired to conduct a detailed transportation study for the Kisumu County Government. Identify and discuss the key GIS components and functionalities that you would rely on to get the job done. [20 marks]

Question 3

Discuss the main data types used in transportation planning, together with their possible sources. [20 marks]

Question 4

Assess the role of travel demand management in planning for mass transit within the Nairobi Metropolitan Region. [20 marks]

Question 5

Examine the role of transportation in Kenya's socio-economic development. [20 marks]

Question 6

Briefly discuss each of the following concepts as employed in transportation research.

- i. Transport analysis zones (TAZs)
- ii. Flow entities
- iii. Mobility vs. accessibility
- iv. Network analysis

[20 marks]