



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2022/2023 ACADEMIC YEAR  
THIRD YEAR FIRST SEMESTER**

**SCHOOL OF NATURAL RESOURCE,  
ENVIRONMENTAL STUDIES AND AGRICULTURE**

**BACHELOR OF ARTS IN GEOGRAPHY AND  
GEOSPATIAL TECHNIQUES**

**COURSE CODE: GEO3243-1  
COURSE TITLE: SPATIAL ANALYSIS:  
PRINCIPLES AND METHODS**

**DATE: 11<sup>TH</sup> DECEMBER, 2023**

**TIME: 1100-1300 HOURS**

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## **INSTRUCTIONS TO CANDIDATES**

Answer **ALL** questions in Section A, and any **THREE** questions in Section B.  
use illustrations where appropriate.

*This paper consists of 2 printed pages. Please turn over*

**SECTION A – 20 MARKS**

- Q1. Explain the types of spatial objects as used in spatial Analysis **(4 marks)**
- Q2. Discuss the types of operations in Network analysis **(4 marks)**
- Q3. Describe the components of spatial analysis **(2 marks)**
- Q4. Explain the criteria used in defining neighborhoods **(4 marks)**
- Q5. Describe the general spatial analysis process **(4 marks)**
- Q6. Discuss the differences between Kriging and traditional interpolation **(2 marks)**

**SECTION B – 30 MARKS**

- Q7. Describe any nine (9) basic primitives as used in Spatial analysis **(10 marks)**
- Q8. Assuming you wanted to analyze road network of a certain area, discuss the system and data requirements as per Claussen (1991) **(10 marks)**
- Q9. Discuss the five (5) scales or levels of measurements for Geographic attributes **(10 marks)**
- Q10. Describe the process of performing Spatial Interaction Model using example of customer behavior analysis **(10 marks)**

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