MAASAI MARA UNIVERSITY

SPECIAL UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER

SCHOOL OF NATURAL RESOURCE, TOURISM AND HOSPITALITY
BACHELOR OF URBAN AND REGIONAL PLANNING

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

DATE: ..... APRIL, 2024 **TIME: ..... HOURS**

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section **A** and any other **THREE** in section **B.**

This paper consists of 2 printed pages. Please turn over

SECTION A – 20 MARKS

Q1. Differentiate the following terminologies as used in spatial analysis

a) Kernel Density Estimation (**1 mark)**
b) Spatial Interpolation (**1 mark)**

Q2. Define the spatial data exploration **(2 marks)**

Q3. Discuss the steps of carrying out data exploration in spatial analysis **(6 marks)**

Q4. Explain the Classification and symbolization in generalization **(2 Marks)**

Q5. Discuss the Spatial Data Types **(6marks)**

Q6. Discuss how Spatial auto-correlation may arise **(2 marks)**

SECTION B – 30 MARKS

Q7. The underlying processes that drive geographic patterns can be broadly categorized into natural and human processes. These processes shape the distribution and arrangement of various phenomena across the Earth's surface. Discuss any five underlying processes. **(10 marks)**

Q8. Discuss any five measures of geographical distribution **(10 marks)**

Q9. Geographic patterns are recurring spatial arrangements or distributions of various phenomena across the Earth's surface. These patterns can be observed in a wide range of natural and human-made features and are important for understanding the world and making informed decisions. Discuss any ten common types of geographic patterns. **(10 marks)**

Q10. Spatial analysis is very important in analyzing several issues and queries in geography. Discuss ten important ways of using spatial analysis in geography

(10 marks)