NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENVIRONMENTAL SCIENCE

DEPARTMENT OF GEOSPATIAL SCIENCE

MSC DEGREE IN APPLIED GEOGRAPHICAL INFORMATION SCIENCE AND REMOTE SENSING

ADVANCED GIS ANALYSIS

EGR 5204

Regular Examination Paper

November 2024

This examination paper consists of 2 pages

Time Allowed: 3 hours

Total Marks: 100

Examiner's Name: Mr Albert Chirima

External Examiner: Dr M Shekede

INSTRUCTIONS

1. Answer QUESTION **ONE** AND ANY **THREE** OTHERS
2. Each question carries 25 marks

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
6	25
TOTAL	100

1(a) Briefly explain the concept of geospatial modelling. **(5 marks)**

(b) Explain the advantages and disadvantages of geospatial modelling in natural resources management. **[10 marks]**

(c) Discuss the ethical considerations of using GIS for surveillance **[10 marks]**

2. "Spatial data is the fuel of spatial analysis" Discuss

3. Given the intrinsic imperfections of GIS data, how reliable are the results of GIS analysis.

4. Apply spatial modelling technique to solve a real world problem.

5. Evaluate the use of GIS in emergence response and disaster management.

6(a) Explain the concept of spatial autocorrelation and its functions in GIS analysis. **[10 marks]**

(b) Discuss the advantages and disadvantages of using regression analysis in GIS **[15 marks]**