NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF ENVIRONMENTAL SCIENCE

DEPARTMENT OF GEOSPATIAL SCIENCE

REMOTE SENSING APPLICATIONS IN NATURAL RESOURCES MANAGEMENT
(EGR 2103)

Main Examination Paper

December 2024

This Examination Paper consists of 2 pages

Time Allowed:	3 hours
Total Marks:	100
Special Requirements:	Nil
Internal Examiner:	Ms Z. Dzinotizei
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) Highlight the importance of forests as a natural resource.   [10 Marks]

   (b) Explain remote sensing techniques that can be applied in monitoring the health and
       status of forests.   [15 Marks]

2. (a) Describe the impacts of natural disasters on the natural resource base.   [10 Marks]

   (b) With the aid of an example, evaluate the role of remote sensing in natural disaster risk
       mapping.   [15 Marks]

3. Describe and explain the importance of remote sensing in the quantification of biomass for
   carbon credits.

4. Discuss the importance of remote sensing in enhancing productivity and sustainability in
   agriculture.

5. Discuss the role of remote sensing technologies in monitoring mining and resource
   excavation activities and ensuring adherence to environmental regulatory compliance.

6. Describe the remote sensing methods that can be used to track bush encroachment in
   grasslands.