

GEO 111



ALUPE UNIVERSITY

**OFFICE OF THE DEPUTY VICE CHANCELLOR
ACADEMICS, RESEARCH AND STUDENT AFFAIRS**

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

**FIRST YEAR FIRST SEMESTER REGULAR MAIN
EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF
EDUCATION (ARTS)**

COURSE CODE: GEO 111

**COURSE TITLE: INTRODUCTION TO REMOTE SENSING
AND GIS**

DATE: 18TH DECEMBER, 2023

TIME: 9.00AM – 12.00PM

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 3 PRINTED PAGES

PLEASE TURN OVER

GEO 111: INTRODUCTION TO REMOTE SENSING AND GIS

STREAM: BED (Arts)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer Question **ONE** and any other **TWO** questions.
- ii. Maps, sketches and diagrams should be used whenever they serve to illustrate an answer.
- iii. Do not write on the question paper.

Question One

- a) Explain the meaning of the following terms as used in GIS:
 - i. Digitization (2 Marks)
 - ii. Spatial data (2 Marks)
 - iii. Database (2 Marks)
- b) Differentiate between active and passive remote sensing. (4 Marks)
- c) You have been contracted as a consultant in the Department of forests and natural resources in Buha Country to lead in resource conservation exercise in the County.
 - i. Justify to the County Government why they would require remote sensing technology in mapping forests and other natural resources. (12 Marks)
 - ii. Highlight the challenges likely to be experienced in using remote sensing technology in mapping forests and other natural resources in the County. (8 Marks)

Question Two

- a) With suitable examples, elucidate four main questions which GIS is capable of answering. (8 Marks)
- b) Describe geographical features studied in GIS based on their dimensions. (12 Marks)

Question Three

- a) Describe major phases in the history of development of remote sensing. (12 Marks)
- b) Explain the advantages of using GIS in analysis of data. (8 Marks)

Question Four

Giving relevant examples outline the application of remote sensing in the following areas:

- a) Forestry (5 Marks)
- b) Geology (5 Marks)
- c) Land degradation (5 Marks)
- d) Meteorology (5 Marks)

Question Five

- a) How is GIS technology different from other information systems? (2 Marks)
- b) Explain sources of data used in GIS. (8 Marks)
- c) Discuss disadvantages of raster data format. (10 Marks)
