



**ALUPE UNIVERSITY  
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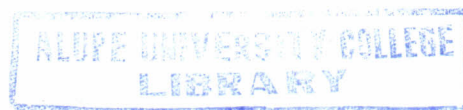
**OFFICE OF THE DEPUTY PRINCIPAL  
ACADEMICS, RESEARCH AND STUDENTS' AFFAIRS**

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# **UNIVERSITY EXAMINATIONS**

## **2018 /2019 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER REGULAR EXAMINATION**



**FOR THE DEGREE OF BACHELOR OF  
EDUCATION (ARTS/B.ST)**

**COURSE CODE: GEO 111**

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

**DATE: 19<sup>TH</sup> DECEMBER, 2018**

**TIME: 2.00 PM – 5.00 PM**

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### **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) / BED (B.Studies)**

**DURATION: 3 Hours**

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**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) Define the following terms:
  - i. Spatial data (2 Marks)
  - ii. Mosaic (2 Marks)
  - iii. Database (2 Marks)
- b) Explain how GIS and remote sensing complement each other. (4 Marks)
- c) Alupe University College is planning to set up a GIS laboratory.
  - i. Explain to the management the stages which will be followed to achieve setting up the laboratory. (12 Marks)
  - ii. Explain FOUR challenges which might be encountered during the implementation of this task. (8 Marks)

**Question Two**

- a) Define the following terms as used in remote sensing
  - i. Electromagnetic radiation (2 Marks)
  - ii. Electromagnetic wavelength (2 Marks)
  - iii. Electromagnetic spectrum (2 Marks)
  - iv. Surface phenomena (2 Marks)
  - v. Volume phenomena (2 Marks)
- b) Explain how sensors used in remote sensing use electromagnetic energy radiation to detect image of an object. (10 Marks)

**Question Three**

- a) Explain FIVE commonly used passive sensors in remote sensing. (10 Marks)
- b) Explain FIVE advantages of aerial photographs over maps. (10 Marks)

**Question Four**

- a) Giving examples, discuss FOUR circumstances which may lead to occurrence of errors in GIS. (12 Marks)
- b) Explain FOUR measures which can be used to minimize occurrence of errors in GIS. (8 Marks)

**Question Five**

- a) Discuss THREE types of data model used in database management system in GIS. (12 Marks)
- b) Explain FOUR advantages of vector data format used in GIS. (8 Marks)

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