ALUPE UNIVERSITY COLLEGE
...Bastion of Knowledge...
P. O.Box 845-50400 Busia(K)
principal@auc.ac.ke
Tel: +254 741 217 185
+254 736 044 469
off Busia-Malaba road

OFFICE OF THE DEPUTY PRINCIPAL
ACADEMICS, RESEARCH AND STUDENT AFFAIRS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

FOURTHYEAR FIRSTSEMESTER REGULAREXAMINATION

FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS/BUSINESS STUDIES)

COURSE CODE: GEO 111

COURSE TITLE: INTRODUCTION TO REMOTE SENSING AND

DATE: 20/1/2022 **TIME:** 2-5PM

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 3 PRINTED PAGES **PLEASE TURN OVER**

STREAM: BED (Arts)/BED (B.Studies) **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 the answer.*

iii. *Do not write on the question paper.*

Question One

a) Define the following terms as used in remote sensing:

i. Sensor (2 Marks)

ii. Platform (2 Marks)

iii. Target (2 Marks)

b) Explain the difference between modern remote sensing and traditional aerial photography. (4 Marks)

c) Alupe University College is planning to set up a GIS laboratory.

i. Explain to the administration the stages which will be followed in setting up the GIS laboratory. (12 Marks)

ii. Explain the challenges which might be encountered during the implementation of the GIS laboratory. (8 Marks)

Question Two

a) Discuss main classification of sensor platforms used in remote sensing. (12 Marks)

b) Explain how sensors used in remote sensing use electromagnetic energy radiation to detect image of an object. (8 Marks)

Question Three

a) Describe FIVE commonly used passive sensors in remote sensing. (10 Marks)

b) Explain advantages of GIS maps over conventional paper maps. (10 Marks)

Question Four

a) Discuss circumstances which may lead to occurrence of errors in a GIS. (12 Marks)

b) Explain measures which can be taken to minimize occurrence of errors in a GIS. (8 Marks)

Question Five

a) Using illustrations, describe the following data models used in GIS:

i. Hierarchical model (5 Marks)

ii. Network model (5 Marks)

b) Explain advantages of vector data format used in GIS. (10 Marks)

****