



(Knowledge for development)

**KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER
MAIN EXAMINATIONS**

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

COURSE CODE: GEO 311

COURSE TITLE: REMOTE SENSING

DATE: JULY 21, 2021

TIME: 2 – 4 PM

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- 1. Answer Question ONE (Q1) Compulsory**
- 2. Answer any other TWO (2) Questions**
- 3. Use illustration where appropriate**

This paper consists of 2 printed pages. Please Turn Over.

QUESTION 1

- a. Define remote sensing (2 marks)
- b. Explain the following terms as applied in remote sensing:
 - i. Path length (2marks)
 - ii. Refraction (2 marks)
 - iii. Spatial effect (3 marks)
 - iv. Temporal effect (3 marks)
- c. Highlight FIVE advantages of applying remote sensing technology over manual censuses in mapping of resources. (10 marks)
- d. Using an example in each case, explain any two types of remote sensing platforms. (8 marks)

QUESTION 2:

- a. Explain any three advantages of active sensors over passive sensors (6 marks)
- b. Discuss the different forms of scattering of electromagnetic energy by the atmosphere. (14 marks)

QUESTION 3

- a. Differentiate between long and short waves of the electromagnetic energy (4 marks)
- b. Account for the absence of Sun's ultra-violet rays and x-rays in remote sensing of the earth surface. (4 marks)
- c. Discuss any FOUR factors that may affect a RADAR image (12 marks)

QUESTION 4

Discuss any five photo-terrain characteristic for object identification and classification. (20 marks)

QUESTION 5

Discuss applications of remote sensing in the following fields:

- a. Agriculture (10 marks)
- b. Conflict management (10 marks)