



MAASAI MARA UNIVERSITY

**RESIT EXAMINATIONS
2023/2024 ACADEMIC YEAR
THIR YEAR FIRST SEMESTER**

**SCHOOL OF NATURAL RESOURCES,
ENVIRONMENTAL STUDIES AND
AGRICULTURE**

**BACHELOR OF ARTS IN GEOGRAPHY AND
GEOSPATIAL TECHNIQUES**

**COURSE CODE: GEO 3126-1
COURSE TITLE: PHOTOGRAMMETRY**

DATE: 13/12/2023

TIME: 1430-1630 HRS

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in section **A** and any other **THREE** in section **B**.

This paper consists of 2 printed pages. Please turn over

SECTION A: SHORT ANSWER QUESTIONS (20 MARKS)

Answer any four of the following questions. Each question carries 5 marks.

1. Discuss the historical development of photogrammetry. **(5 marks)**
2. Describe the principle of stereo viewing and enumerate different types of stereo models used in interpreting photographic data.
(5 marks)
3. Define tilt and relief displacement in aerial photographs and explain how they impact the interpretation of photographic data in photogrammetry
(5 marks)
4. Elaborate on the methods used to determine heights from aerial photographs, emphasizing the parallax-height formula, the use of a parallax bar, and their significance in photogrammetric analysis.
(5 marks)
5. Describe the essentials of flight planning in photogrammetry. Explain the importance of scales, overlaps, overhang, and the creation of mosaics and orthophotos in aerial imaging. **(5 marks)**

SECTION B: LONG ANSWER QUESTIONS (30 MARKS)

Answer any three of the following questions. Each question carries 10 marks.

6. In detail, trace the evolution of photogrammetry from its origins to its present-day applications. Discuss how technological advancements have influenced the field. **(10 marks)**
7. Demonstrate the process of utilizing stereo models and stereographic equipment in interpreting and analyzing

photographic data. Provide real-world examples highlighting their significance in photogrammetry. **(10 marks)**

8. (i) Explain the geometric principles governing aerial photographs. **(5 marks)**

(ii) Elaborate on the challenges posed by tilt and relief displacement and how these challenges are overcome in photogrammetric analysis. **(5 marks)**

9. (i) Discuss the significance of accurate flight planning in the context of photogrammetry. **(5 marks)**

(ii) Highlight the role of scales, overlaps, overhang, mosaics, and orthophotos in producing reliable and precise aerial images for analysis. **(5 marks)**

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