



UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

**FIRST YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN GEOGRAPHY**

GEOG 114: PRACTICAL GEOGRAPHY AND FIELDWORK I

STREAM: BSc (GEOG)

TIME: 3HRS

DAY: FRIDAY [11.30 – 14.30 P.M]

DATE: 06/02/2026

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

INSTRUCTIONS:

- i. Answer question **ONE** and any **OTHER TWO** questions.
- ii. Do not write on this question paper.
- iii. Examples, diagrams and sketch maps may be used whenever they serve to illustrate an answer

QUESTION ONE (30 MARKS)

- a) Using an appropriate sketch, explaining how the latitudes and longitudes influence map coordinates at a global scale **(10 Marks)**
- b) Provided is a topographic map of Ngong, Kenya, sheet number 148/3, edition 10-D.O.S. 1975, series Y 731 (D.O.S 423) at a scale of 1:50,000. Use it to answer the below questions.
 - i) Using the graph paper provided, draw a cross-sectional profile between points with the following geographic coordinates: Point A coordinates $1^{\circ} 30'S$, $36^{\circ} 40'E$ and Point B coordinates $1^{\circ} 25'S$, $36^{\circ} 45'E$. **(10 Marks)**
 - ii) Considering a point where River Loodo Ariak crosses Ngong Circular Road West as a pour point, delineate its drainage basin and draw streams on the tracing paper provided. **(6 Marks)**
- c) A camera with a 152 mm- focal length lens is used to take a vertical photograph from a flying height of 2780 m above mean sea level. If the terrain is flat at an elevation of 500 m, compute the scale of the photograph. **(4 Marks)**

QUESTION TWO (20 MARKS)

- a) Explain the **TWO** types of cartographic map compilations **(10 Marks)**
- b) Briefly explain any **FIVE** activities carried out and qualify to be practical application of geographic knowledge **(10 Marks)**

QUESTION THREE (20 MARKS)

Differentiate between the following:

- i) Perspective and orthographic projection **(4 Marks)**
- ii) Fiducial marks and principal points **(4 Marks)**
- iii) Nautical chart and aeronautical chart **(4 Marks)**
- iv) High oblique and low oblique aerial photographs **(4 Marks)**
- v) Topographical map and thematic map **(4 Marks)**

QUESTION FOUR (20 MARKS)

- a) Explain **THREE** categories of map data classified according to the dimensional characteristics against the map scale **(6 Marks)**
- b) Examine any **THREE** techniques of cartographic scale change **(6 Marks)**
- c) Explain any **FOUR** factors to be considered before an air photography mission is undertaken **(8 Marks)**

QUESTION FIVE (20 MARKS)

Assume that you have been tasked to carry-out geographic field data collection in Laikipia University and the surrounding areas. Based on the task ahead, answer the following questions.

- a) List any **FIVE** data collection equipment you would use **(5 Marks)**
- b) Discuss any **FIVE** challenges you are likely to face in data collection and the mitigation measures you would employ **(15 Marks)**