

UNIVERSITY EXAMINATIONS

FIRST SEMESTER 2025/2026 ACADEMIC YEAR

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

GEOG 214: PRACTICAL GEOGRAPHY & FIELDWORK II

STREAM: R

TIME: 3 HRS

DAY: FRIDAY [11.30 – 13.30 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 (compulsory)** and any other **TWO** questions.
(ii) Examples, diagrams and sketch maps should be used whenever they serve to illustrate an answer.

QUESTION ONE (30 MARKS)

- a) Using appropriate sketches, differentiate between grids and graticules. **(4 Marks)**
- b) Write short notes on the following methods of surveying.
- i) Tacheometry **(2 Marks)**
 - ii) Plane table surveying **(2 Marks)**
 - iii) Levelling **(2 Marks)**
 - iv) Compass surveying **(2 Marks)**
 - v) Chain surveying **(2 Marks)**
- c) The table below shows coordinates of two points, T₁ and A. Compute the bearing and distance between the two known points. **(6 Marks)**

Point	Northings (m)	Eastings (m)
T ₁	-40,276.66	-8783.92
A	-40,736.90	-8906.81

- d) A parcel of land has boundary points P, Q, R, S and T with coordinates as shown in the table below. Using appropriate technique, compute the area of the parcel in hectares. **(10 Marks)**

Point	Northings(m)	Eastings(m)
P	1036.20	1009.90
Q	1110.40	1183.50
R	1132.90	1108.60
S	1098.70	1055.40
T	1115.40	1022.10

QUESTION TWO (20 MARKS)

- a) Define a map projection. **(2 Marks)**
- b) Examine any **four** elements of aerial photo interpretation. **(4 Marks)**
- c) Differentiate between the **two** types of coordinate systems. **(6 Marks)**
- d) Explain what a Global Positioning System (GPS) is and examine its **THREE** segments **(8 Marks)**

QUESTION THREE (20 MARKS)

- a) Define aerial photography. **(2 Marks)**
- b) Examine any **five** factors that influence aerial photography. **(9 Marks)**
- c) Discuss any **two** applications of aerial photography. **(6 Marks)**

- d) Define the term network as applied in network analysis and list **two** application areas of network analysis. **(3 Marks)**

QUESTION FOUR (20 MARKS)

- a) Differentiate between linear and angular measurements. **(4 Marks)**
b) Discuss any **five** methods used for linear measurements. **(10 Marks)**
c) Discuss any **two** sources of errors that occur in surveying observations **(6 Marks)**

QUESTION FIVE (20 MARKS)

Write short explanatory notes on the following:

- i) Engineering surveying **(4 Marks)**
ii) Hydrographic surveying **(4 Marks)**
iii) Remote sensing **(4 Marks)**
iv) Cartography **(4 Marks)**
v) Photogrammetry **(4 Marks)**